

GAO

Report to the Ranking Minority Member,  
Subcommittee on African Affairs,  
Committee on Foreign Relations,  
U.S. Senate

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June 2003

# FOREIGN ASSISTANCE

## Sustained Efforts Needed to Help Southern Africa Recover from Food Crisis



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# Highlights

Highlights of [GAO-03-644](#), a report to the Ranking Minority Member, Subcommittee on African Affairs, Committee on Foreign Relations, United States Senate

## Why GAO Did This Study

The southern Africa food crisis threatened 15.3 million people in six countries (Lesotho, Malawi, Mozambique, Swaziland, Zambia, and Zimbabwe) with famine. GAO was asked to look at (1) factors that contributed to the crisis, (2) how well the populations' needs were met, (3) obstacles to the food aid effort, and (4) challenges to emerging from crisis.

## What GAO Recommends

GAO recommends that the Secretaries of State and Agriculture and Administrator of the U.S. Agency for International Development

- review issues related to biotech foods in emergency food aid—such as health, trade and environment concerns—in anticipation of future crises; and
- work with international donors and national governments on a recovery strategy integrating, among others, agricultural development, HIV/AIDS, and natural disaster management.

The Departments of State and Agriculture, USAID, and WFP generally agreed with our recommendations. Their technical comments were incorporated as appropriate.

[www.gao.gov/cgi-bin/getrpt?GAO-03-644](http://www.gao.gov/cgi-bin/getrpt?GAO-03-644).

To view the full product, including the scope and methodology, click on the link above. For more information, contact David Gootnick (202) 512-3149 ([gootnick@gao.gov](mailto:gootnick@gao.gov)).

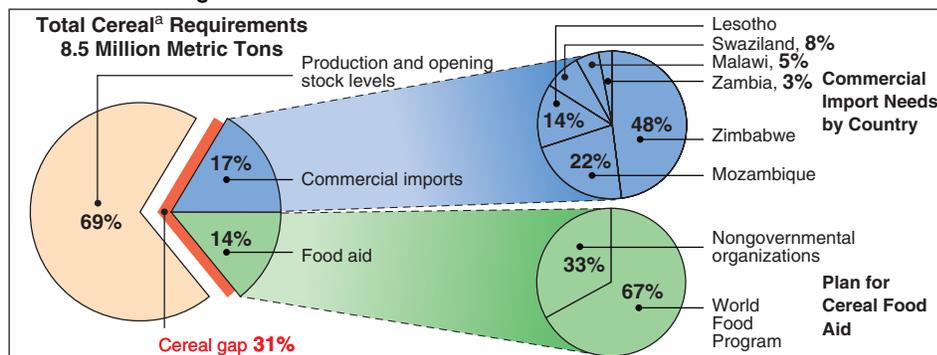
## FOREIGN ASSISTANCE

# Sustained Efforts Needed to Help Southern Africa Recover from Food Crisis

## What GAO Found

- **Multiple factors contributed to the food crisis.** Erratic weather reduced maize (corn) production. A poorly functioning agricultural sector caused food supply shortages. Government actions—including the sale of Malawi's grain reserve and Zimbabwe's land reform—further cut available food. Widespread poverty contributed to food insecurity and the HIV/AIDS epidemic exacerbated food shortages by reducing the labor force.
- **Food aid averted famine, but the overall response did not prevent widespread hunger.** About 93 percent of the total cereal gap—the difference between domestic needs and production—was met by the end of the April 2002-March 2003 crisis period. However, food aid deliveries fell short in several countries, and vulnerable households had limited ability to purchase commercial maize.

### Plan for Addressing Cereal Needs in the Six Countries



Source: GAO analysis of information provided by WFP.

<sup>a</sup>Cereal includes maize and other grains suitable for food.

- **Slow donations, poor infrastructure, and concerns about biotech food were major obstacles to an effective response.** Excluding the United States, most donors did not make sufficient, timely donations to the World Food Program. Poor transportation systems and storage facilities hampered efficient food delivery. Zambia rejected food aid because of concerns regarding biotech food; other countries required milling maize for the same reason. This compromised the food aid pipeline given the United States was the region's key donor and its aid may contain biotech food.
- **Declining investments in agriculture and the HIV/AIDS epidemic pose challenges to emerging from crisis into sustained recovery.** U.N. and U.S. officials cite the need to reverse declining trends in agricultural investments by international financing organizations, national governments, and donors. Without a strategy that integrates, among other things, agricultural development, the impact of HIV/AIDS, and natural disaster management, food crises will recur.

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**Abbreviations**

CFSAM	Crop and Food Supply Assessment Mission
C-SAFE	Consortium for the Southern Africa Food Security Emergency
EMOP	Emergency Operations
EWS	early warning systems
FAO	Food and Agriculture Organization
FEWS NET	Famine Early Warning Systems Network
GIEWS	Global Information Early Warning System
IFAD	International Fund for Agricultural Development
IFPRI	International Food Policy Research Institute
IMF	International Monetary Fund
NGO	nongovernmental organization
OFDA	Office of Foreign Disaster Assistance
SADC	Southern African Development Community
UNAIDS	Joint United Nations Program on HIV/AIDS
UNICEF	United Nations Children’s Fund
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
VAC	vulnerability assessment committee
VAM	vulnerability assessment mapping
WFP	World Food Program
WHO	World Health Organization

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United States General Accounting Office  
Washington, D.C. 20548

June 25, 2003

The Honorable Russell D. Feingold  
Ranking Minority Member  
Subcommittee on African Affairs  
Committee on Foreign Relations  
United States Senate

Dear Senator Feingold:

The southern Africa region has been facing its worst food crisis in more than a decade. Approximately 15.3 million people (26 percent of the total population) in 6 countries—Lesotho, Malawi, Mozambique, Swaziland, Zambia, and Zimbabwe—have experienced severe food shortages and the threat of famine. Avoiding famine has required substantial supplies of food from commercial imports<sup>1</sup> and a large international food aid effort. The United Nations began establishing emergency food aid operations in individual countries as early as November 2001. In July 2002, the United Nations appealed to international donors for \$507 million to provide 1.2 million metric tons of emergency food aid as part of a consolidated regional program for the April 2002-March 2003 crop year. However, food shortages continue and emergency operations have been extended through June 2003.

Because of concerns over the nature and severity of this food crisis, you asked us to determine: (1) what factors contributed to the current crisis in southern Africa, (2) how well were the populations' overall food needs met during the crisis period, (3) what were the major obstacles to the food aid effort, and (4) what are the challenges to emerging from the crisis into sustained recovery.

To address these objectives, we met with and analyzed information from U.S. government officials at the U.S. Agency for International Development (USAID) and the Departments of State and Agriculture in Washington, D.C., and at U.S. missions in Botswana, Malawi, Mozambique, Zambia, Zimbabwe, and South Africa. We also met with officials and reviewed information from the World Food Program (WFP), the Food and Agriculture Organization (FAO), and the International Fund for

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<sup>1</sup>Depending on a country's policies, commercial imports represent the private sector, the government, or both. In some cases governments subsidize private sector imports.

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Agricultural Development (IFAD) at their headquarters in Rome and in the southern African countries we visited. In addition, we gathered information from and met with representatives of the World Bank and the International Monetary Fund (IMF), other U.N. agencies, nongovernmental organizations (NGO), other donor governments, and host government ministries in Washington and at the country level in southern Africa. As part of our fieldwork, we observed WFP and NGO food aid distributions in Malawi, Mozambique, Zambia, and Zimbabwe. (App. I provides detailed information on our scope and methodology.)

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## Results in Brief

The primary factors that contributed to the food crisis were: (1) erratic weather, (2) a poorly functioning agricultural sector, (3) questionable government actions, (4) widespread poverty, and (5) the HIV/AIDS epidemic. Erratic weather patterns contributed to a reduction in southern Africa's cereal<sup>2</sup> production by 29 percent on average.<sup>3</sup> But this decline alone would not have caused a food crisis absent other conditions. Food stocks were depleted from previous poor harvests and farmers lacked access to agricultural inputs such as seeds and fertilizer. Government actions such as the sale of grain reserves in Malawi and disruptive land reform policies in Zimbabwe—which spurred a 75 percent drop in that country's commercial maize (corn) production over the past 2 years—further reduced food supply. Widespread poverty contributed to food insecurity in the region. HIV/AIDS, which has infected 13 percent to 33 percent of the population in the six countries, exacerbated the crisis by reducing both productivity and agricultural output and severely limiting the populations' ability to cope with a bad harvest and high food prices.

By the end of the April 2002-March 2003 crisis period, approximately 93 percent of the regional cereal gap<sup>4</sup> was met. Commercial cereal imports were reported as 1.72 million metric tons (MT), while the food aid effort achieved at least 0.73 million MT (60 percent of the planned amount). Provision of this food prevented large-scale famine and death. However,

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<sup>2</sup>As used in this report, cereal refers to plants that yield grain suitable for food and includes maize, millet, sorghum, rice, and wheat.

<sup>3</sup>This figure reflects total production for these six countries in the 2001/02 season compared with average production over the previous 5 years.

<sup>4</sup>Total cereal gap is calculated by estimating annual domestic cereal needs and subtracting the estimated harvest during the year plus cereal stocks at the beginning of the year.

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food did not reach the region early enough to avert widespread hunger, and many people resorted to rationing food, reducing expenditures on nonfood items, and selling household assets (such as tools and livestock). Success in filling the total cereal gap varied widely across the six affected countries. For example, Malawi more than eliminated its cereal gap, whereas Mozambique cut its gap by about 50 percent. According to currently available data, rates of acute malnutrition in the region have not deteriorated significantly.

The major obstacles to the food aid effort were (1) the lack of sufficient, timely food donations; (2) poor infrastructure in recipient countries; and (3) concerns associated with biotech food.<sup>5</sup> Although the United States made substantial, early donations, in aggregate, donor country commitments of food were 18 percent below WFP's operational needs through the end of December. Moreover, given the lag in time between when food commitments were made and when food arrived in country, the shortfall in the first 6 months of the crisis period was much higher. Poor infrastructure—ports, rail, roads, and storage facilities—in recipient countries hampered efficient delivery of food aid, limited how quickly food could reach recipients, and ultimately prevented food from reaching some beneficiaries. Concerns about the health and environmental safety of food aid that might contain bioengineered products led Zambia to reject U.S.-donated maize and most of the other countries to impose costly and time-consuming processing requirements—which further reduced or delayed the food aid effort, increased costs, and complicated emergency operations.

The major challenges to emerging from the current food crisis into sustained recovery include (1) declining investment in the region's agricultural sector, (2) the limited scope of existing programs related to food security,<sup>6</sup> and (3) the negative impact of HIV/AIDS. Recognizing that little progress has been made to address impediments to the transition from crisis to recovery, the U.N. Secretary-General and several other key

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<sup>5</sup>Modern agricultural biotechnology employs scientific techniques, such as genetic engineering, to modify plants, animals, or microorganisms by introducing desired traits in them, including characteristics from unrelated species. For example, traits may be introduced to facilitate pest management and improve yield or nutritional value. In this report, we refer to foods derived from genetically modified plants as biotech foods. (See app. VII and our evaluation of agency comments.)

<sup>6</sup>Food security is commonly defined as physical and economic access by all people at all times to enough food to meet their dietary needs for an active and healthy life.

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stakeholders have called for a more comprehensive, integrated approach to break the pattern of recurrent food crises in Africa. While the food outlook for the next crop year—April 2003 through March 2004—is better, food security conditions are still tenuous; and without sustained progress, recurring food crises may be difficult to avoid in the future.

This report makes recommendations to the Secretaries of State and Agriculture and the Administrator of USAID, to (1) undertake a comprehensive review of the issues pertaining to biotech foods in emergency food aid in anticipation of future food crises, and (2) work with international organizations, donors, national governments, and key stakeholders to develop a recovery strategy that integrates agricultural development, HIV/AIDS, and natural disaster management, among other things.

We received written comments on a draft of our report from the Departments of State and Agriculture, USAID, and WFP, which we have reprinted in appendixes VIII, IX, X, and XI, respectively. These agencies generally agreed with our overall conclusions and recommendations while expressing technical concerns on specific points, primarily issues related to biotech food. Their technical comments, along with those received from FAO, IMF, and the World Bank, have been incorporated into the report as appropriate.

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## Background

In 1991/92, drought caused massive crop failure, threatening 18 million people in 10 southern African countries with famine. Because of a similar reduced maize crop after the 2001/02 crop cycle,<sup>7</sup> several early warning systems predicted an impending food crisis that would run through the beginning of the following harvest in April 2003. (App. II provides a timeline of the crisis period, and app. III provides information on early warning systems.)

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<sup>7</sup>The maize crop cycle in southern Africa runs roughly from mid-November (when crops are planted) through mid-April (when crops are harvested).

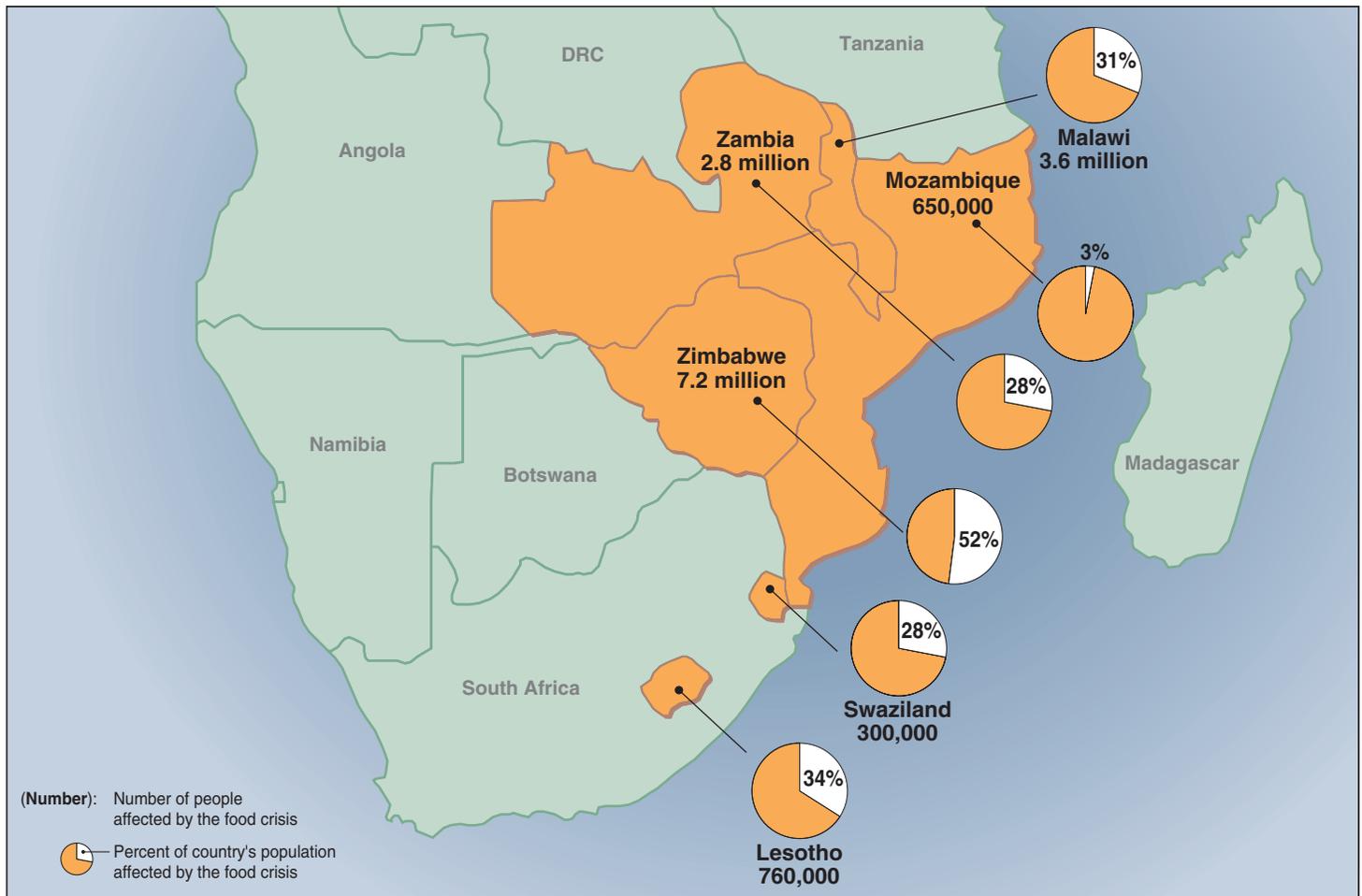
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Regional and national assessments of the crisis conducted by WFP, FAO, and others estimated that 15.3 million people<sup>8</sup> in the region were at risk of starvation. (Fig. 1 shows the population at risk of famine in each of the six affected countries.)

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<sup>8</sup>Three assessments of the southern Africa food crisis were conducted between April 2002 and March 2003. The first round was a series of national Crop and Food Supply Assessment Mission (CFSAM) reports published in May 2002, which estimated that 12.8 million individuals would be at risk of starvation at the peak of the crisis. The second round, published in September 2002 as Emergency Food Security Assessment Reports, increased the at-risk estimate to 14.4 million people at the peak of the crisis. The third round of assessments, published in January 2003, increased the estimate to 15.3 million people.

**Figure 1: Population at Risk of Famine in the Affected Southern African Countries**



Source: GAO and MapArt.

In July 2002, WFP initiated the Southern Africa Crisis Response Emergency Operation (EMOP) for providing food aid to the six countries on a regional basis. Prior to this consolidation, WFP had been delivering food to the individual country emergency operating programs. WFP's objectives in the southern Africa food crisis were to prevent severe food shortages, safeguard the nutritional well-being of vulnerable segments of the population, preserve human assets, and prevent migration out of affected areas.

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As the major food aid donor in the southern Africa crisis, the U.S. government has a significant role in the relief effort. Through USAID's Food for Peace Office and its Office of Foreign Disaster Assistance and USDA, the U.S. government has worked to support the EMOP and address the crisis. In February 2002, in an effort to avert famine, the United States began authorizing food aid shipments to the region. As of March 18, 2003, the U.S. government had provided approximately \$275 million in food aid and \$13 million for bilateral nonfood-related assistance such as agriculture, health, shelter, and sanitation. (See app. IV for additional information on the U.S. contributions.)

WFP, the United States, and other countries partner with nongovernmental organizations to distribute food aid at the regional and village level. In addition, many of these organizations also provide nonfood emergency assistance and long-term development aid.<sup>9</sup>

Much of the population in each of the affected countries works in the agricultural sector. The percentage of labor force engaged in agriculture ranges from 66 percent in Zimbabwe to 86 percent in Lesotho and Malawi. Many of these farmers rely on maize (corn) as the primary staple crop. Unlike root crops such as cassava and sweet potatoes—which are common but less popular staples in the region—maize is relatively fragile, requiring more fertilizer and differing amounts of water during the growing season.

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## Multiple Factors Contributed to the Food Crisis

The immediate factor contributing to the food crisis was the erratic weather patterns that disrupted the normal growing cycle, causing maize production in southern Africa to drop from a 5-year average of about 7.3 million MT to about 5.2 million MT in 2002. The dramatic reduction in available maize can also be linked to a weak agricultural sector and government actions, such as Malawi's decision to sell off its strategic grain reserve and Zimbabwe's fast-tracked land reform. In addition, much of the region's population had limited access to food because of widespread poverty. The HIV/AIDS epidemic further exacerbated the population's access to basic commodities by decreasing household food production and income and increasing consumption requirements.

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<sup>9</sup>Nongovernmental organizations are nonprofit, private entities funded by private, governmental, and international organizations. NGOs are WFP's principal implementing partners in providing emergency food assistance.

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## Erratic Weather Patterns Played a Key Role in Reducing Maize Production

Erratic weather patterns between December 2001 and May 2002 reduced the harvests in five of the six affected countries, except Mozambique, when compared with 5-year averages. Drought-like conditions gripped parts of Malawi, southern Mozambique, Swaziland, southern Zambia, and Zimbabwe in the middle of the growing season (see app. II for timeline). This water deficit at a crucial point in the growing season severely stressed crops and caused many hectares<sup>10</sup> to wilt. In addition, parts of Zambia suffered high rainfall mid-season, flooding the still-growing crops. Similarly, in Malawi, after the mid-season dry spells wilted some crops, the country received heavy rains that hampered the harvesting and drying of what crops remained, and in some cases, caused them to rot. Lesotho also experienced prolonged rains late in the season as well as an additional late-season frost that damaged crops across large parts of the country and drastically reduced production.

## Regional Cereal Production Dropped by 29 Percent

Regional food supplies have been limited due to poor cereal harvests in five out of the six affected countries. (See table 1.) Mozambique was the one exception: Its 2001/02 cereal harvest was actually above average. However, due to transportation constraints, Mozambique's production surpluses could not be supplied to the southern part of the country where cereal harvests were lower.

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<sup>10</sup>One hectare equals 2.47 acres.

**Table 1: Cereal Production by Country**

In metric tons

	2001/02 season	5-year average <sup>a</sup>	Percentage change
Lesotho	121,500	171,000 <sup>b</sup>	-29%
Malawi	1,772, 000	2,081,000	-15%
Mozambique	1,767,000	1,678,000	5%
Swaziland	70,000	90,000	-22%
Zambia	738,000	1,095,000	-33%
Zimbabwe	705,840	2,164,000	-67%
<b>Total</b>	<b>5,174,340</b>	<b>7,279,000</b>	<b>-29%</b>

Source: Famine Early Warning Systems Network (FEWS NET) Vulnerability Assessment Committee (VAC) Reports, September 2002 through January 2003.

<sup>a</sup>Represents average production for the harvests in 1997 through 2001.

<sup>b</sup>Estimated.

**Poorly Functioning  
Agricultural Sector  
Negatively Affected Food  
Supply**

In addition to poor weather conditions, weaknesses in the agricultural sector contributed to a poor harvest. According to IFAD, these weaknesses included the following:

- **Declining soil fertility reduced crop yields.** In Lesotho, average maize and sorghum yields have declined by more than 60 percent since the mid-1970s. According to FAO, declining soil fertility is a primary cause of this trend and is leading to a crop production catastrophe in that country.
- **Restricted access to agricultural inputs such as seeds and fertilizer limited harvests.** In Zambia, important inputs such as seeds and fertilizer were not available until December 2001 or January 2002, resulting in late plantings. These crops were at a crucial stage of development when the rains ceased in early 2002, causing crop failure.
- **Incomplete market development impaired farmers' ability to sell crops.** In Malawi, market reforms of the 1980s and 1990s eliminated price controls and removed government food grain monopolies. While these liberalizing reforms increased the availability of seeds and fertilizer, small farmers still lack access to credit.

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## Recent Government Actions Further Reduced the Food Supply

The food supply has been constrained further by certain government actions, the most damaging of which were the sale of grain reserves in Malawi and fast-tracked land reform in Zimbabwe.

### Sale of Malawi's Grain Reserve Hindered Stable Food Supplies

Between July 2000 and August 2001, the National Food Reserve Agency of Malawi sold the 167,000 MT of maize it had purchased and stored as food reserves for the country. Despite several audits, it is still uncertain where the proceeds of the sale went. While the sold reserves did not cause the Malawi food crisis, their absence jeopardized the population's food security. Had the government retained 60,000 MT of maize in accordance with its own policy to ensure adequate food supplies or an equivalent amount of currency to purchase new stocks, it could have been used to help ease food shortages in the early stage of the crisis, when a considerable number of people are reported to have died,<sup>11</sup> and to fill almost one-quarter of the country's cereal gap while emergency response operations were ramping up.

An investigation by Malawi's National Audit Office in May 2002 concluded that the National Food Reserve Agency lost money in every area of handling maize because of poor financial management. Another investigation, conducted by Malawi's Anti-Corruption Bureau in mid-2002, found that poor management of the grain reserve allowed companies and individuals to take advantage of the maize shortage to increase prices beyond the reach of a large sector of the community. The mismanagement cost the Malawian government more than K 2.9 billion (about \$40 million).<sup>12</sup>

### Zimbabwe's Land Reform Decimated Production and Strained Region's Supply

After years of trying to redistribute the country's arable land, the government of Zimbabwe fast-tracked its land reform and resettlement policy in 2000 with the aim of acquiring all commercial farms no later than August 8, 2002. The campaign was characterized by the forced expulsion of landowners and farm laborers. To date, there remain more than a million

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<sup>11</sup>According to a study by the international NGO ActionAid between January and April 2002, at least 500 to 1,000 people died of hunger and hunger-related diseases in southern and central Malawi. WFP reported that more than 70 people died in the village of Gwengwe during that time—all victims of the district's severe food crisis. The Commissioner of Malawi's Department of Disaster Preparedness for Relief and Rehabilitation told us that his agency estimated 1,200 people died from hunger-related causes between December 2001 and June 2002.

<sup>12</sup>Based on 2001 year-end exchange rate: US\$1=Malawi K 72.2.

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internally displaced farm laborers. While the government did acquire these farms, it did not maintain them to ensure continued productivity. As a result, the land seizure destabilized the country's economy, leading to a 75 percent drop in commercial maize production over the past 2 years and turning Zimbabwe from a net exporter of grain to a net importer. Because Zimbabwe now cannot grow enough food to feed its own population, it has strained the cereal supply for the entire region.

According to the State Department, the country's gross domestic product fell by more than 20 percent and inflation soared to more than 269 percent between 1998 and 2002, coinciding with fast-tracked land reform. At the same time, unemployment rose by more than 25 percent as dismantling of commercial farms left many rural farm workers without a source of income and, therefore, a way to purchase food when their subsistence crops failed. In addition, government-imposed price controls on basic commodities have caused shortages of everything from bread, milk, sugar, and wheat flour to fuel and electricity.

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### Widespread Poverty Contributed to Food Insecurity

The six nations affected by the food crisis are generally low-income countries. The percentage of population subsisting on less than \$1 per day range from 36 percent in Zimbabwe to 64 percent in Zambia. This widespread poverty and lack of productive assets (e.g., livestock and farm machinery) contribute to food insecurity in the region. In addition, the region is currently facing serious economic problems that further increase the population's food insecurity. For example, in recent years, the dramatic collapse in the economy of Zimbabwe and a decline in the mining industry in South Africa and Zambia have removed sources of employment for many individuals in the region. The region's food insecurity is associated with high rates of chronic malnutrition in the under-5 population—ranging from 30 percent in Swaziland to 59 percent in Zambia.

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### HIV/AIDS Epidemic Exacerbated Food Shortages

The HIV/AIDS epidemic has strained already-diminished food supplies by decreasing affected households' food production and increasing nutritional requirements. In addition, the epidemic limits households' access to food by decreasing income and increasing household expenses. According to the Joint United Nations Program on HIV/AIDS (UNAIDS), adult HIV/AIDS infection rates in 2001 were approximately 31 percent for Lesotho, 15 percent for Malawi, 13 percent for Mozambique, 33 percent for Swaziland, 22 percent for Zambia, and 34 percent for Zimbabwe. Infection rates are

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higher among women, who generally account for 70 percent of the agricultural labor force and 80 percent of food production in Africa.

### HIV/AIDS Reduces Food Supplies

HIV/AIDS has decreased household food production by attacking people in their most productive working years, thus reducing the labor force. Around three-fourths of HIV/AIDS cases in southern Africa are among adults between the ages of 20 and 40. The percentage of agricultural labor force lost due to HIV/AIDS deaths by 2000 was nearly 6 percent for Malawi and 10 percent for Zimbabwe. Recent studies on specific rural areas show, for example, that each adult death in Zambia was associated with a 16 percent reduction in the amount of land planted by the household, and 72 percent of households affected by chronic illness in selected rural areas of Malawi experienced an agricultural production decrease.<sup>13</sup> In addition, a person infected with HIV/AIDS requires up to 50 percent more protein and 15 percent more calories than a noninfected person. These extra needs put a further strain on the already limited food supplies.

### HIV/AIDS Decreases Access to Food

HIV/AIDS has lowered household incomes, making it more difficult to access what food is available. Recent studies estimate that GDP growth in southern Africa is currently around 1 percent to 2 percent lower due to HIV/AIDS.<sup>14</sup> For the six affected countries, 1 percent of GDP in 2001 amounted to around \$200 million. Recent studies in the region also show large monetary impacts at the household level. For example, in Zambia, HIV/AIDS-affected households reported annual income levels of 30 percent to 35 percent less due to the disease. In Zimbabwe, households with orphans had 42 percent less income per capita than households without orphans. In addition, medical care and funeral expenses are significant: In Zambia, 42 percent of households with chronically ill members reported unusually high health care expenses compared with 14 percent of households without chronically ill members, while in Zimbabwe, funeral costs can be as much as twice the annual per capita poverty line.

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<sup>13</sup>A 1992 study in Malawi found that a person infected with HIV/AIDS was estimated to work only 9.7 years out of a potential 25.3 years.

<sup>14</sup>To estimate this reduction, most studies rely on simulations of projected income growth in a case with HIV/AIDS and in a (hypothetical) case without HIV/AIDS. The results of these studies vary, primarily due to assumptions about how HIV/AIDS affects savings and investment rates and the skill composition of the labor force.

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## Food Needs Not Fully Met, but Famine Was Averted

By the end of the April 2002-March 2003 crisis period, approximately 93 percent of the regional cereal gap appeared to have been met.<sup>15</sup> Commercial cereal imports were reported as 1.72 million MT, while the food aid effort achieved at least 0.73 million MT (60 percent of the planned food aid amount). The commercial cereal imports and food aid prevented large-scale famine and death but did not reach parts of the region early enough throughout most of the crisis period to avert widespread hunger. Many people resorted to coping mechanisms, such as rationing their food intake, reducing their expenditures on nonfood items, and selling household assets to obtain food. The limited data available on nutritional status generally do not show a significant impact on acute malnutrition in the countries of the region. In addition to problems with timely delivery of food, U.N. agencies were only able to fund about 25 percent of urgent, nonfood emergency humanitarian needs.

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## Approximately 93 Percent of the Cereal Gap Met during the Crisis Period

The May/June 2002 FAO/WFP crop and food supply assessments (CFSAM) for each of the six countries estimated the cereal gap for the region at 4.1 million MT or 43 percent of domestic requirements for the April 1, 2002, through March 31, 2003, period. However, by the end of March 2003, the cereal gap had been revised downward substantially—to 2.6 million MT or 31 percent of domestic requirements.<sup>16</sup> Based on the plan that evolved from the CFSAMs, the cereal deficit was to be offset by a combination of commercial imports and emergency food aid. The assessments identified an emergency cereals need of 1.2 million MT for the crop year, and this amount was adopted as a goal in the United Nations' July 2002 emergency appeal for food aid for the region. Although later analyses projected more people at risk of famine, the goal for emergency cereals needs was not

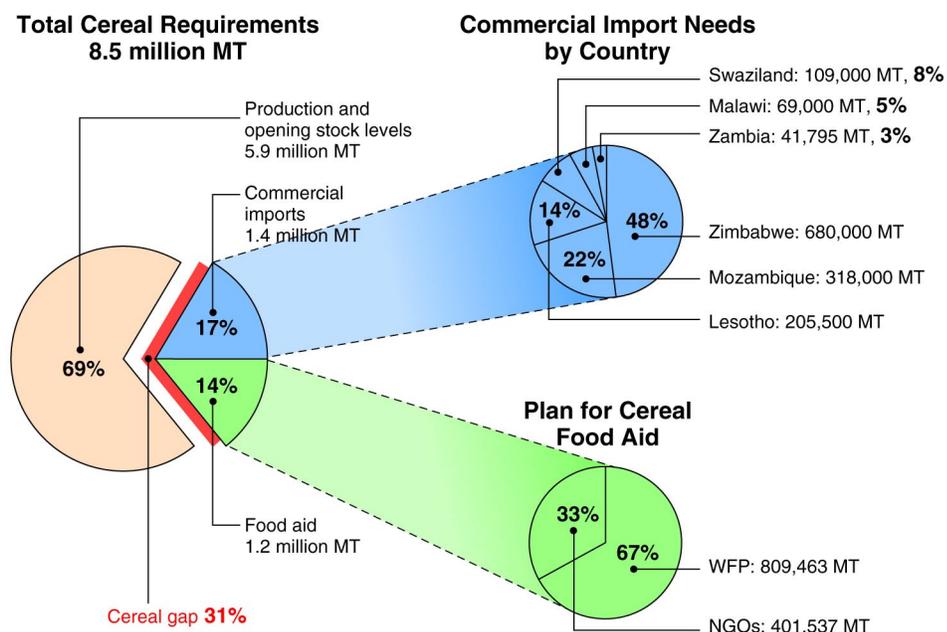
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<sup>15</sup>The Vulnerability Assessment Committees, WFP, and others collected, analyzed, and reported considerable information on the cereal gap. However, complete data were unavailable because the VACs found it difficult to gather information on food aid provided by nongovernmental organizations.

<sup>16</sup>The May/June 2002 FAO/WFP CFSAM initially determined the annual cereal deficit for each country based on estimates of domestic cereal consumption and stock requirements and production. Subsequent VAC and other assessments revised these estimates, resulting in changes to cereal deficit estimates. A requirement to replenish 473,000 MT of cereal stocks by the end of the crop year was dropped, estimates of cereal production and opening stocks were revised upward by 539,000 MT, and estimates of domestic consumption needs were lowered by 425,000 MT; the latter revision was partly due to reduced population figures for Zambia and Zimbabwe.

increased. As shown in figure 2, if the emergency goal of 1.2 million MT were fully met, the estimated need for commercial cereal imports would be 1.4 million MT.<sup>17</sup>

**Figure 2: Revised Estimate of the Cereal Gap in the Six Countries and Plan for Addressing the Deficit (March 2003)**



Source: GAO analysis of information provided by WFP.

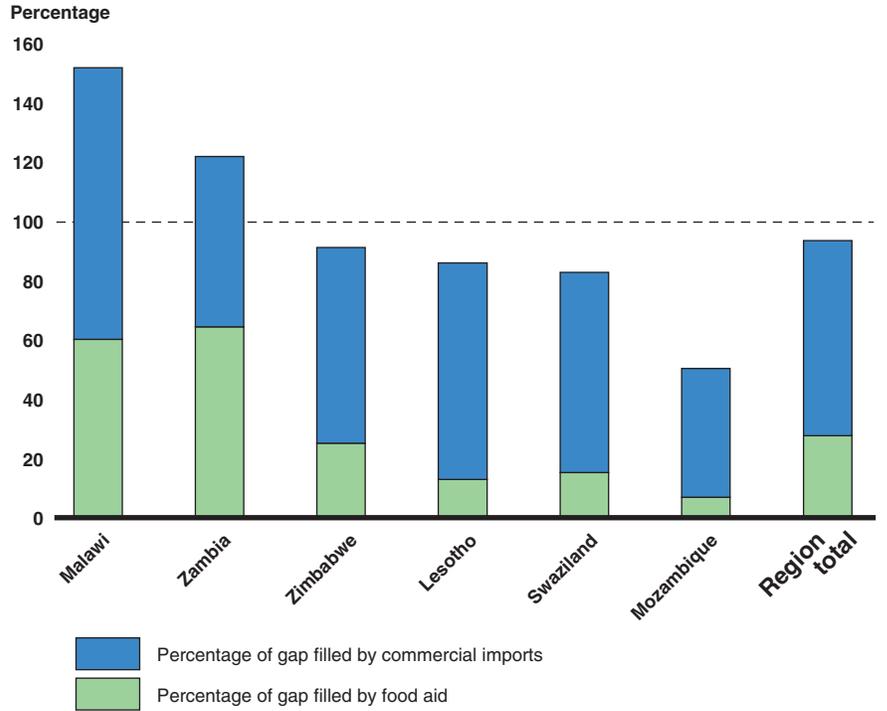
Figure 3 indicates the extent to which food aid and commercial imports helped offset the cereal gap in each country and the region over the April 1, 2002, to March 31, 2003, period. As the figure shows, the region as a whole met at least 93 percent of its need. In two countries—Malawi and Zambia—food aid and commercial imports combined considerably exceeded the cereal gap, while the other four had unmet gaps ranging from between 9 percent to 50 percent. However, the numbers reported by the Vulnerability

<sup>17</sup>Given that the U.N. regional emergency food aid appeal used the original CFSAM emergency food aid targets, we derived the annual commercial import requirement by subtracting planned emergency food aid from the March 2003 revised cereal deficit, as provided to us by WFP.

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Assessment Committees (VAC), WFP, and others do not allow us to precisely define total food aid and commercial import levels. The figures are estimates and should be interpreted with caution. Food aid figures probably underestimate actual values because it was difficult for the VACs and WFP to collect comprehensive food aid data from NGOs. Thus, total NGO contributions could be considerably higher. Regarding commercial imports, some countries had experienced a considerable amount of informal trade in cereals, but the VACs and WFP did not always have access to reliable figures on informal trade. In the case of Zimbabwe, commercial imports may be exaggerated, since the VAC expressed skepticism about the data that were reported. According to some observers, Zimbabwe's price controls may have encouraged a substantial outflow of cereals to neighboring countries where controls did not exist. Thus, the gap in Zimbabwe may have been much greater than shown in the figure.

**Figure 3: Extent to Which Cereal Food Aid and Commercial Imports Met the Cereal Gap (April 1, 2002, through March 31, 2003)**



Source: GAO analysis of information provided by WFP and USAID.

The data in figure 3 do not address the extent to which different parts of a country were served. Although Zambia appears to have offset its cereal gap by a large amount, the January VAC assessment reported serious cereal supply problems at local markets in rural areas.<sup>18</sup> In addition, Malawi, which offset its cereal gap to an even greater extent, reported maize to be available in most markets, but vulnerable households had limited ability to pay for the food. (See app. V for additional information on commercial imports.)

<sup>18</sup>According to WFP, private traders operate primarily in urban markets. Sales are limited in rural markets due to low purchasing power among rural populations.

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## Food Aid Did Not Reach the Region Early Enough to Avert Widespread Hunger

The overall commercial cereal imports and food aid averted widespread famine, according to WFP, USAID, and other observers in the region. However, because food supplies to the region were less than planned during the July through December period, far fewer people received food aid than expected. Many people in vulnerable areas went without meals and resorted to other coping mechanisms as well. Limited data available on nutritional status generally do not show a significant impact on acute malnutrition.

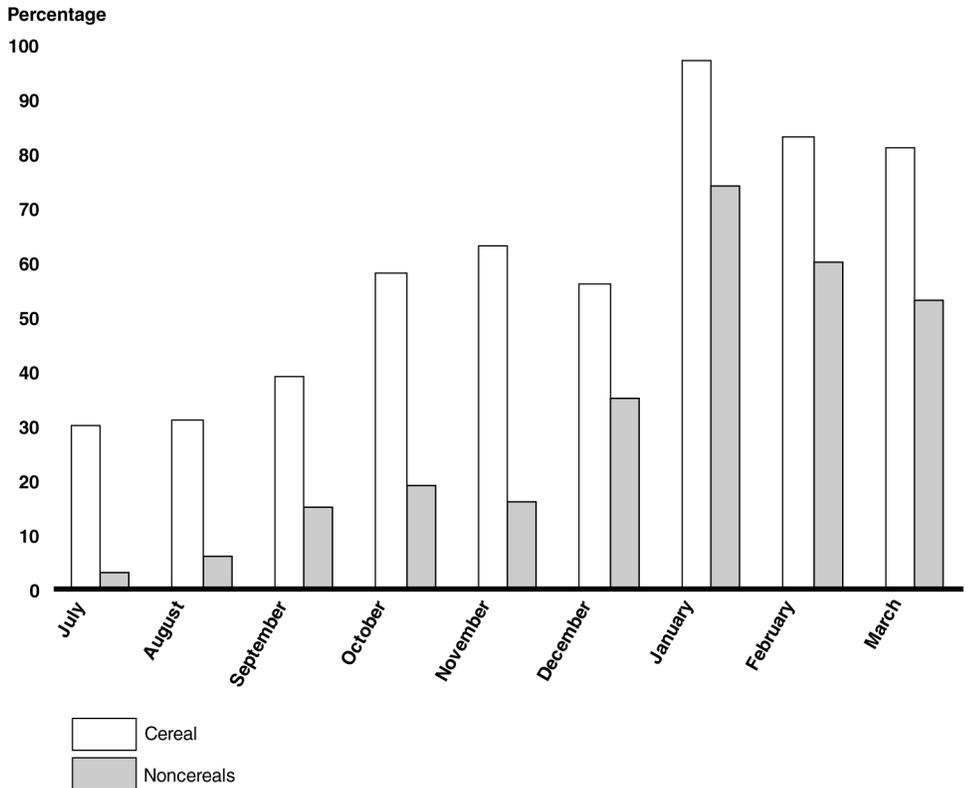
## Food Supplies from World Food Program

Between July and December 2002, WFP distributed only 48 percent of the cereal it planned to provide to beneficiaries during that period. While Malawi and Swaziland received 87 percent and 76 percent, respectively, of their planned deliveries, the other four countries fell below the 40 percent mark.

In addition to cereal, WFP planned to provide several other foods (principally pulses, vegetable oil, and corn/soya blend) for added nutrition as well as to meet the special needs of some of its recipients. WFP realized only 17 percent of its planned distribution of these foods for July through December 2002. WFP deliveries in three countries—Mozambique, Zambia, and Zimbabwe—each represented less than 10 percent of its plans (1 percent in the case of Zambia). In Malawi, which had the best performance, WFP achieved 40 percent of its planned distribution.

Figure 4 shows WFP's monthly performance in achieving its plans for delivery of cereals and noncereal commodities in the region. In general, WFP's performance gradually improved between July and December. It improved substantially in January, achieving 97 percent for cereals and 74 percent for noncereals. Deliveries declined during the next 2 months, to a low in March of 81 percent for cereal and 53 percent for noncereals.

**Figure 4: Extent to Which WFP Monthly Food Delivery Targets Were Met (July 2002 through March 2003)**



Source: GAO analysis of WFP data.

### Food Supplies from Nongovernmental Organizations

Independent of WFP's program, NGOs were to provide about 402,000 MT of cereals, or one-third of the emergency cereal need for the region. NGOs obtained or financed food for their efforts from donor countries as well as other voluntary contributions. The United States funded a World Vision program that provided 19,710 MT of cereal food aid to Zimbabwe. In addition, the United States contracted with an NGO consortium, called C-SAFE (Consortium for the Southern Africa Food Security Emergency), to deliver food into the region. According to U.S. officials, the program was part of a longer-term strategy that targeted the most vulnerable populations that the WFP program might miss. USAID, which began discussions with C-SAFE members (CARE, Catholic Relief Services, and World Vision) in July 2002, did not approve a program for the consortium until January 15,

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Beneficiaries Fewer than  
Intended

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2003.<sup>19</sup> However, under a November pre-authorization agreement, C-SAFE began delivering food into the region in late December 2002. As of the end of March 2003, the consortium had delivered about 57,000 MT of cereal food aid to Malawi, Zambia, and Zimbabwe. (See app. IV for additional information on C-SAFE.) Data provided to us by WFP indicate NGOs provided at least another 16,200 MT of cereals food aid into the region.

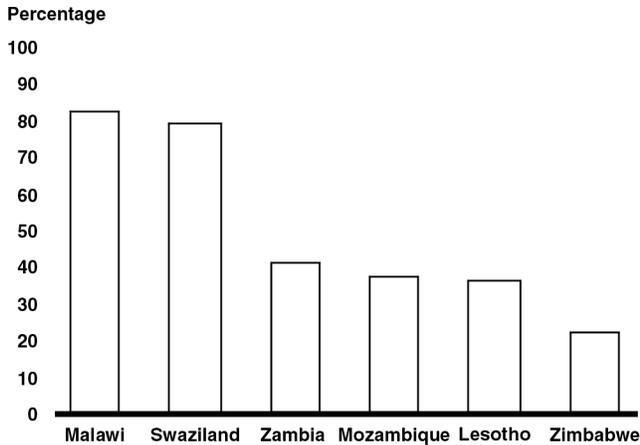
Between July and December 2002, WFP averaged only 3.9 million beneficiaries per month, compared with a planned average of 10.4 million people per month (for both cereal and noncereal food aid).<sup>20</sup> Figure 5 shows how the shortfall in food aid during the July through December 2002 period affected WFP beneficiary levels in each country. In four of the six countries, fewer than 45 percent of planned beneficiaries were served.

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<sup>19</sup>The USAID-approved program authorized 160,000 MT of food aid to be provided during fiscal year 2003 to three of the six countries. The program did not establish a target amount of food aid to be distributed by the end of March 2003.

<sup>20</sup>On average for the 6-month period, WFP planned to assist 8 million people through large-scale general food and food-for-work distributions. This aid would go to families living in rural areas affected by adverse weather and whose coping strategies were depleted because of stress factors, including the increased burden of caring for family members affected by HIV/AIDs. WFP also planned to provide supplementary support to another 2.4 million people during the period, such as malnourished children, school-age children, and expectant and/or nursing women who had needs above and beyond the levels needed to qualify for general food and food-for-work assistance.

**Figure 5: Percent of WFP Total Planned Beneficiaries Who Received at Least Some Food Aid (July through December 2002)**



Source: GAO analysis of WFP data.

Note: According to USAID officials, Malawi and Swaziland did better than the other countries, at least in part because they placed fewer or no restrictions on biotech food aid.

In addition, many people who did receive food aid did not receive a full ration.<sup>21</sup> For example, WFP officials in Malawi told us that during November they were only able to provide cereal to many of their beneficiaries. Beans and vegetable oil were unavailable to provide a balanced diet.

### Reduced Food Intake, Other Coping Strategies

Studies show that people in vulnerable communities reduced food intake as their major coping strategy, and this approach has increased since the crisis began. For example, as of December 2002, more than 60 percent of the population in all regions of Malawi reduced the amount of food and number of meals they ate, according to the VAC.

The Southern African Development Community (SADC) identified other coping strategies including reducing expenditures on nonfood items, selling or trading household assets to get food (e.g., sale of livestock), increasing consumption of wild foods, migrating to find work or food,

<sup>21</sup>According to WFP, the food baskets were incomplete largely because of when pledged resources arrived as well as donor preferences for in-kind contributions of certain commodities. Beans, oils, and corn/soya blend are often under-resourced.

stealing, and resorting to prostitution. Table 2 shows the extent to which surveyed households in Zambia relied on reduced food consumption and other coping strategies from between August and December 2002.

**Table 2: Frequency of Household Coping Strategies in Zambia (August through December 2002)**

<b>Coping Strategy</b>	<b>Percent of households engaged in each</b>
Reduced number of meals	78
Reduced amount at meal times	72
Skipped food for an entire day	58
Reduced expenditures on alcohol and tobacco	57
Increased consumption of wild foods	38
Reduced expenditures on non-food items	34
Above-normal livestock sales	32
Borrowed from friends and relatives	30
Borrowed from nonfamily members	27
Borrowed from money lenders	5

Source: Zambia National Vulnerability Assessment Committee, *Zambia Emergency Food Security Assessment* (Lusaka, Zambia: January 2003).

## Nutritional Impacts Mixed

Between 1999 and 2001, acute malnutrition rates in countries of the region for children under 5 years of age were between 1.2 percent and 6.4 percent. Some assessments conducted between May and October 2002 found an increase in acute malnutrition rates compared with earlier studies but did not find rates consistent with a severe food crisis, which would be 10 percent to 15 percent. However, these studies did not exclude possible pockets of severe malnutrition or hunger-related deaths in the region. Also, adult malnutrition and malnutrition in urban areas were not surveyed.<sup>22</sup> More recent assessments (December 2002 through January 2003) of acute malnutrition for children under age 5 in select districts of Malawi, Mozambique, Swaziland, and Zambia found rates generally ranging between 2 percent and 8 percent. However, the rate was 11.2 percent in one province of Mozambique.

<sup>22</sup>The Malawian VAC's July-August household survey found that adults were eating less than children and thus might experience a more rapid decline in nutritional status.

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According to a recent internal U.S. government report, anecdotal evidence from the field in late 2002 indicates that in certain districts in Zimbabwe, children were being admitted to some health care facilities in increasing numbers for malnutrition. At one facility, three to five children were reported to have died of malnutrition during each month of 2002. More formal nutrition surveys within the country have demonstrated acute malnutrition rates of 6.4 percent and 7.3 percent in May and August 2002, respectively. Results from a nutrition survey conducted in early 2003 are still pending.

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## Nonfood Emergency Needs Severely Underfunded

In addition to requesting \$507 million for emergency food aid for July 2002 through March 2003, U.N. agencies also requested \$143.7 million<sup>23</sup> to address urgent and related humanitarian needs that increased people's vulnerability to famine for the July 2002 through June 2003 period. As of April 9, 2003, less than 25 percent of the total identified requirements had been funded, according to an April 22 U.N. southern Africa humanitarian crisis update. Principal objectives of the request were to:

- prevent, contain, and address the outbreak of disease through enhanced health and nutritional surveillance;
- address the needs of people living with HIV/AIDS and seek to prevent new infections;
- ensure an adequate and timely provision of agricultural inputs for the next planting season as well as emergency veterinary inputs;
- maintain the capacity for planning recovery efforts in food self-sufficiency, education, and health services; and
- prevent marginal populations from falling into a downward spiral that could lead to prolonged dependency in the future.

A longer-term objective was to phase out emergency humanitarian assistance and move toward a development agenda focused on poverty reduction, HIV/AIDS prevention and control, and support for food security

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<sup>23</sup>The initial request for nonfood needs was for \$104 million. However, specific requests for some countries and sectors were revised upward or downward during the year. As of early April 2003, the overall request was for \$143.7 million.

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by increasing food production and strengthening foreign exchange earnings. (For additional information on nonfood emergency needs, see app. VI.)

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### Slow Donations, Poor Infrastructure, Concerns Associated with Biotech Food Were Major Obstacles to an Effective Response

Major obstacles to the food aid effort's success were the lack of sufficient, timely food donations; poor infrastructure in recipient countries; and concerns associated with biotech food. Although the United States made substantial, early donations, aggregate commitments from donor countries were 18 percent below what WFP needed for the July through December period. The shortfall was actually higher given the lag in time between when food is committed and when it arrives in-country. Poor infrastructure in recipient countries and related logistical constraints impeded efficient delivery of food aid and in some cases prevented food from reaching beneficiaries. Concerns over biotech food led Zambia to reject U.S.-donated maize and other countries to impose costly processing requirements. These actions reduced or delayed food aid, increased costs, and complicated the logistics of the emergency operation.

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### Lack of Sufficient, Timely Donations Contributed to Food Aid Shortfalls

By the end of June 2002, the United States had delivered more than 41,000 MT of food aid to ocean ports in the southern African region. U.S. deliveries to these ports between July and December 2002 represented approximately 50 percent of the food WFP needed to arrive in-country during that period. (See app. IV for additional information on U.S. food aid donations.) Nonetheless, in aggregate, donors did not make sufficient, timely donations to WFP.

WFP needed about 855,000 tons of food (cereals and noncereals) to arrive in the six countries from July through December 2002 to support its planned food distributions. During that period, donors advised WFP that they would contribute about 701,000 tons—a shortfall of 18 percent. However, the shortfall was actually greater because of the considerable lag time between when WFP was advised in writing that a contribution would be made and when food arrived in a beneficiary country. WFP officials estimate that in-kind contributions take 3 to 5 months from the time donors confirm the contribution to the arrival of food aid at its final distribution

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sites.<sup>24</sup> However, according to WFP officials, when contributions are made in cash and procurement is done within the region, the process can be reduced to 1 to 3 months.

Table 3 shows the countries that gave the most to WFP's regional emergency food aid operation and when they advised WFP of their intended donations. Some of the major donors, including the United States and the United Kingdom, gave large amounts early to the crisis. Others, including the European Union, South Africa, and Japan, waited several months or longer before confirming what they would contribute.

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<sup>24</sup>According to USAID officials, depending on the availability of commodities and shipping, as well as need in an affected country, USAID in-kind contributions can be provided in as short a time as 6 weeks.

**Table 3: Contributions to WFP and Their Timing**

Food in metric tons							
	Cumulative Confirmed Donations <sup>a</sup> to WFP's Southern Africa Regional EMOP by End of March 2003						
	Jul 2002	Aug 2002	Sep 2002	Oct 2002	Nov 2002	Dec 2002	Mar 2003
United States	194,350	197,550	248,403	248,403	326,553	326,553	326,553
European Union				139,854	139,854	139,854	179,531
South Africa							100,000
United Kingdom	62,515	65,385	65,385	65,231	65,231	65,231	70,231
Japan				35,295	35,450	54,386	56,662
Algeria							31,000
Germany		6,113	14,539	15,344	15,344	24,256	22,775
Australia		6,185	14,335	14,597	14,597	18,098	18,248
Finland		4,075	6,149	8,377	8,377	14,575	14,934
Canada	1,661	1,661	6,779	6,697	6,697	12,573	12,573
OPEC							12,411
Netherlands	1,097	10,797	10,797	10,797	10,797	10,797	10,625
All others <sup>b</sup>	7,133	12,961	12,789	14,471	14,471	35,097	36,549
<b>Total</b>	<b>266,756</b>	<b>304,727</b>	<b>379,176</b>	<b>559,066</b>	<b>637,371</b>	<b>701,420</b>	<b>892,092</b>

Source: GAO analysis based on WFP data.

<sup>a</sup>A confirmed donation (in kind or in cash) is when a donor has notified WFP in writing of what it will donate.

<sup>b</sup>There were 29 other donors, some of which were private or multilateral entities. Together, they accounted for 4.1 percent of all donations, with an individual range from 0.001 percent to 0.7 percent.

WFP acknowledged that the early months of the regional EMOP would indeed have benefited from more rapid mobilization of resources. At the same time, WFP said, as of mid-May 2003, the operation had been 93 percent resourced, by 41 institutional donors—which represented an unusually supportive response.

### Poor Infrastructure Hampered Efficient Food Delivery

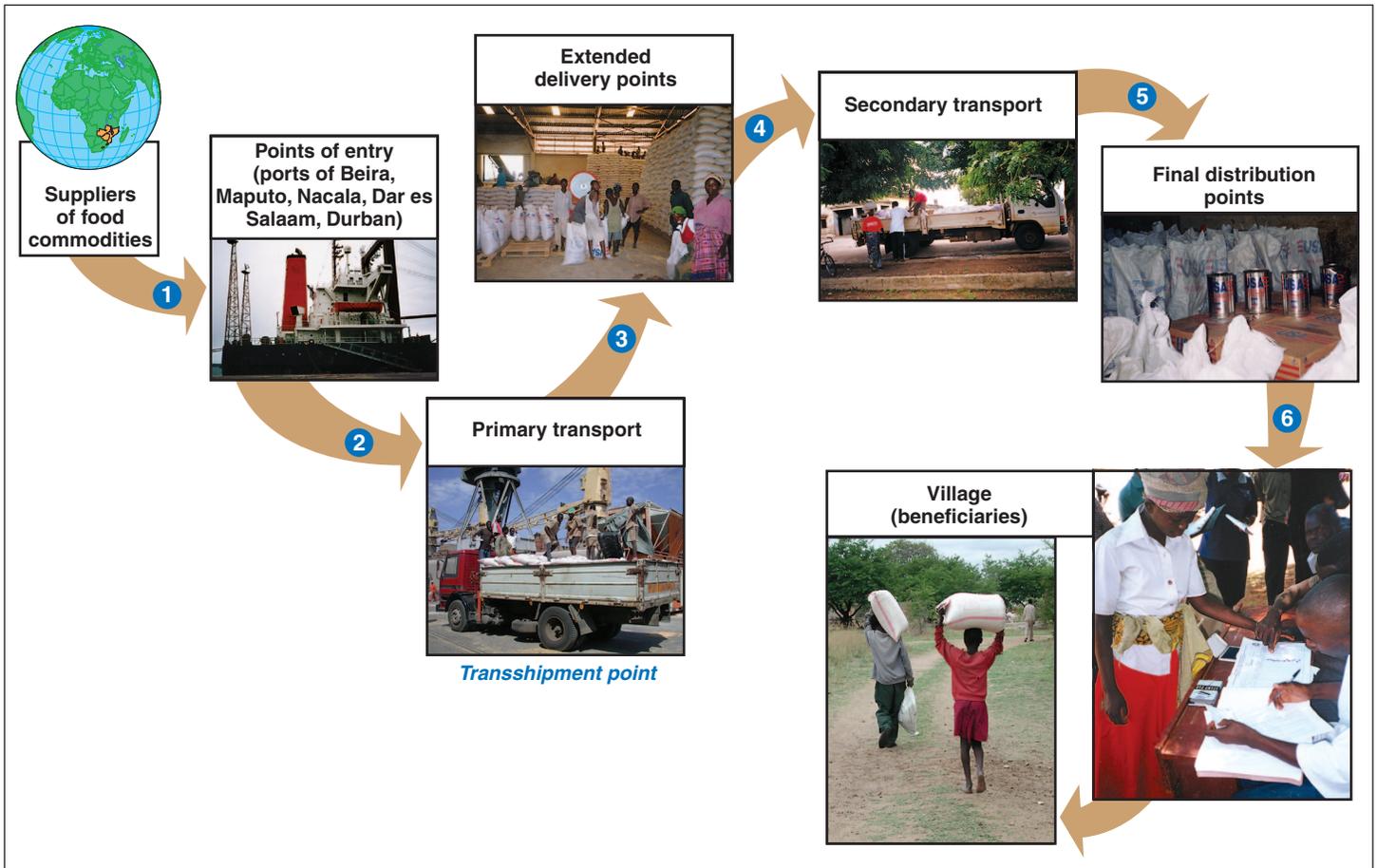
The flow chart shown in figure 6 illustrates WFP's logistics process of delivering food, from the time it is shipped by suppliers to the time food is actually distributed to the recipients at the village level.<sup>25</sup> Food aid

<sup>25</sup>In addition, NGOs that were directly funded by the U.S. government carried out a similar operation.

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commodities are either purchased by WFP regionally or shipped to the region through one of five ports of entry: Beira, Nacala, and Maputo in Mozambique; Durban in South Africa; or Dar es Salaam in Tanzania. (See fig. 7 for a map of the transportation network.) From these points of entry, food is transported by truck or rail to intermediate storage facilities, or transshipment points, which are strategically located in various districts within the country to streamline the flow of deliveries. From these strategic locations, food is then transported to extended delivery points—storage facilities generally located at the district level—from which the food aid allocations for each final distribution site are dispatched. WFP manages this process, including transporting the food to the extended delivery points. Wherever possible, nongovernmental organizations that are designated as the implementing partners are responsible for the secondary transport of food from the extended delivery points to the final distribution points.

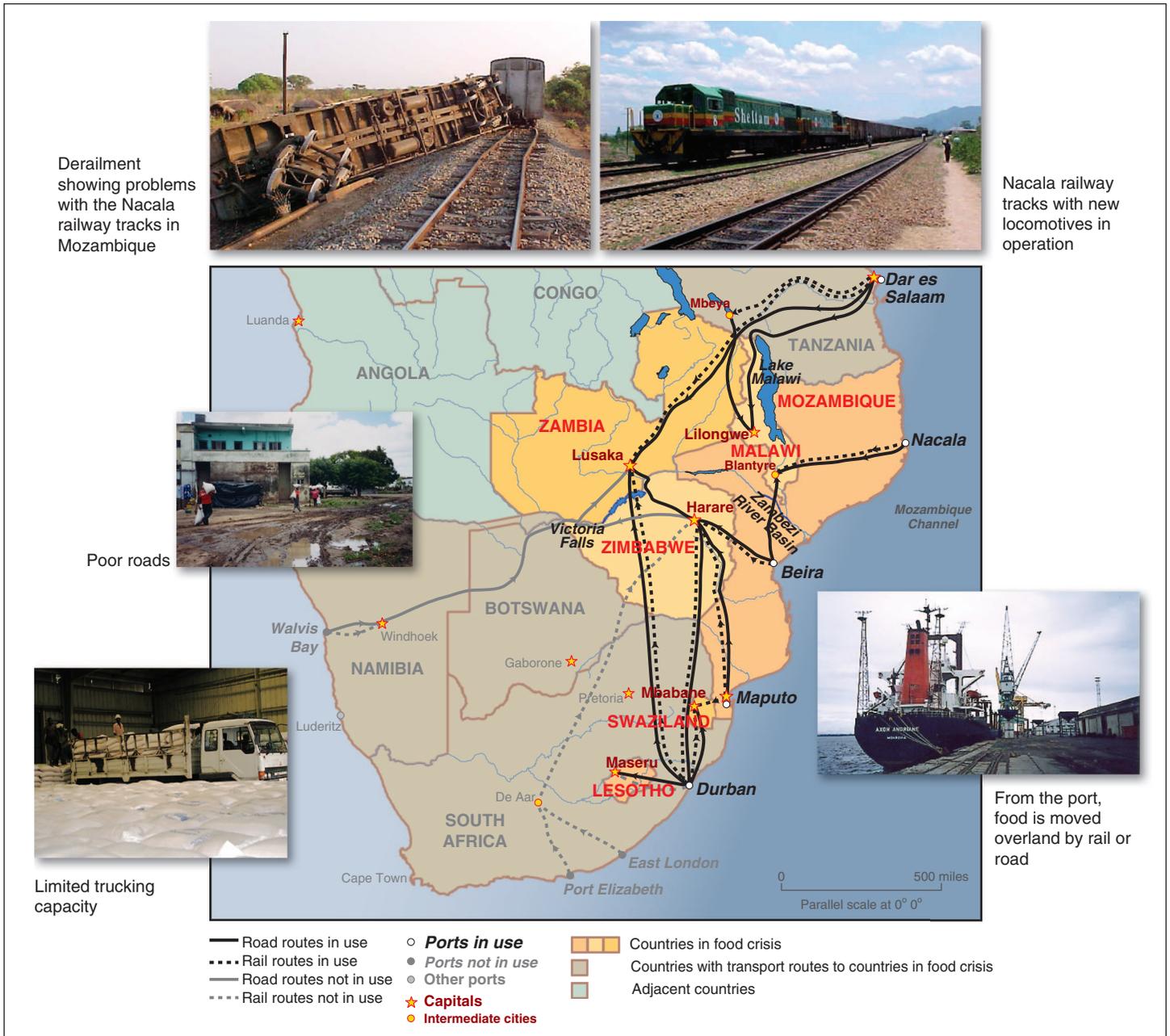
**Figure 6: Steps in the Logistics Process**



Sources: GAO and MapArt, based on World Food Program information; all photos GAO, except primary transport, WFP.

Note: The flow chart does not reflect the additional step of milling. In addition, the chart does not show monitoring of the flow of food deliveries throughout the process to ensure proper receipt and dispatches of food.

**Figure 7: The Transportation Network for Moving Food in the Region**



Source: Map: GAO and MapArt, based on World Food Program information; Photos: GAO, except Nacala railway, WFP.

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Long-standing weaknesses in transportation infrastructure across the region hampered timely delivery of food aid where it was needed. Much of the transportation infrastructure (including ports, railways, and roads) had deteriorated since the 1991/92 drought. For example, the port of Maputo, which is ideally situated for moving food commodities to landlocked countries, such as Swaziland and Zimbabwe, cannot be used optimally because of the lack of adequate port warehouse and storage facilities. However, even when ports are full, there is a limit to the amount of food that can be transported over land to landlocked countries, like Zambia, due to rail and trucking capacity and other logistical considerations.

According to WFP officials, the port of Nacala was in better condition than the port of Maputo. But its rail system—the sole transport link between Malawi and the nearest port in Mozambique and the shortest, cheapest route into Malawi and eastern Zambia—was in such poor condition it had to be fixed during the crisis. In late 2002, the United Kingdom and Canada gave WFP \$6.4 million and \$256,000, respectively, to rehabilitate a 48-mile-long track on the Nacala railway and to lease locomotives and wagons. While these locomotives and ongoing repairs to the rail corridor represented a major breakthrough, unexpected setbacks continued to mire operations. For example, in Malawi, heavy rains in January 2003 completely destroyed one bridge on the Nacala rail line, thus impeding the movement of commodities for at least 10 days. In late summer 2002, a donation of 200 trucks from the government of Norway and the International Federation of Red Cross and Red Crescent Societies helped ease access to places that are particularly hard to reach. However, many village roads in these countries routinely become impassable when the rainy season (September to March) begins, thus isolating beneficiaries from food deliveries.

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## Recipient Country Concerns about Biotech Food Compromised Food Pipeline

In the middle of 2002, Zambia and Zimbabwe debated whether to accept U.S.-donated maize<sup>26</sup> based on concerns that it might contain biotech products that could adversely affect (1) the health of food aid recipients, (2) the countries' agricultural biodiversity,<sup>27</sup> and (3) their ability to export agricultural commodities.<sup>28</sup> Despite some earlier concerns over U.S. biotech food aid and Zimbabwe's objections to biotech whole kernel maize dating back to the middle of 2001,<sup>29</sup> the United States and international agencies did not have a ready alternative to biotech food aid in the southern Africa crisis.<sup>30</sup> The United States was only partly successful in its efforts to persuade southern African country governments to allow

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<sup>26</sup>Crop varieties developed through the application of biotechnology to agriculture were first marketed in the United States in 1994. Because the U.S. grain handling system typically combines biotech and conventional maize varieties (for efficiency purposes), all U.S. food aid corn shipments possibly contained biotech maize. In 2002, roughly 35 percent of U.S. food aid could be considered as having varying degrees of biotech content. See appendix VII for further discussion.

<sup>27</sup>Whole kernel maize, unlike its processed counterpart, has the possibility, if planted, of introducing engineered genes into conventional maize plants.

<sup>28</sup>There is no worldwide, harmonized approach to assessing the safety of biotech foods and regulating their trade. Given the novelty of agricultural biotech products, many countries especially developing countries have no approval process for these products at all. The Cartagena Protocol on Biosafety, an international environmental treaty, will regulate transboundary movements of living genetically modified organisms after it is ratified by 50 countries, which may occur in late 2003. Countries that ratify the protocol may establish their own national systems for assessing and regulating biotech foods.

<sup>29</sup>In 1999, media in Orissa, India, claimed the United States had dumped biotech food aid commodities on developing countries because European and Japanese markets would not buy them. In 2000, Sudanese politicians accused the NGO community of distributing biotech food aid and poisoning the Sudanese people. In 2001, the Ugandan government raised concerns about a program to distribute corn/soya blend rations to 60,000 people living with HIV/AIDS. In 2001, the Bolivian government seized biotech food aid following a decree forbidding imports of products derived from biotech crops. According to USDA, in each of these instances, USDA and/or USAID addressed the recipient country government's concerns and ensured that food aid reached those in need. In December 2001 and May 2002, Zimbabwe rejected U.S. offers to provide shipments of corn that could not be certified as 100 percent biotech free. According to ACIDI/VOCA, an NGO specializing in development and food aid issues, through early 2002 most problems relating to biotech food aid had been resolved relatively quickly and amicably. See ACIDI/VOCA, *Genetically Modified Food: Implications for U.S. Food Aid Programs* (Washington, D.C.: Revised February 2002).

<sup>30</sup>According to USAID officials, the United States did not anticipate the biotech issue, since Mozambique and Zambia had accepted U.S. corn food aid for years. USDA officials said that it was difficult to determine with certainty those food aid recipient countries in southern Africa that would accept or reject food aid containing biotech commodities because of nontransparent, evolving decision-making processes.

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unrestricted import and distribution of food aid, including biotech products, on an emergency basis for the duration of the crisis. Efforts included providing information about agricultural biotechnology and the safety of biotech food aid to Zambia and the other countries. Nevertheless, Zambia rejected all food aid that could have included biotech commodities.<sup>31</sup> Zimbabwe implemented stringent grain handling procedures, including milling of whole grain maize, that significantly slowed distribution of food aid. Malawi, Mozambique, and Lesotho also debated what to do and eventually imposed milling requirements on whole grain maize that were enforced with varying degrees of rigor.<sup>32</sup>

Toward the end of August 2002, FAO, WHO, and WFP issued a common statement on biotech food aid, as did the European Union. Both statements indicated that biotech food aid was unlikely to present a risk to human health and suggested milling the maize as a way to overcome environmental and trade concerns. However, U.S. officials from State, USAID, and USDA believe that, given the severity of the crisis and existing scientific evidence, U.N. agencies and the European Union did not speak out early or forcefully enough on the issue.

The United States rejected the option of donating only milled maize, citing increased costs and limited U.S. milling capacity that would cause delays in getting food aid to needy people. U.S. officials estimate that U.S.-based milling would double the costs of its food aid, thus reducing the amount of aid it could provide. Additionally, according to U.S. officials, agreeing to mill all of the maize could have promoted the idea that unprocessed maize was unsafe. (App. VII provides further discussion of issues related to biotech food.)

Despite the United States' early and large donations, the impasse over biotech food significantly compromised the food pipeline in several ways:

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<sup>31</sup>The United States provided about 280,000 MT of whole kernel maize; about 77,000 MT of corn meal; about 43,000 MT of corn soy blend and corn soy milk; and about 21,000 MT of vegetable oil made from either corn or soybeans. Altogether, about 84 percent of the donated U.S. tonnage could have contained biotech commodities.

<sup>32</sup>According to USAID, in practice Malawi has preferred that whole kernel maize be milled prior to distribution but has not allowed its requirement to slow deliveries of food aid in any way and has only milled comparatively small quantities.

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- **Food aid was reduced and delayed.** On September 3, 2002, Zambia's Agriculture Minister, in a statement to the press, demanded that 19,000 MT of biotech maize that had been delivered to storage facilities inside the country be sent to a country that was willing to accept it. (WFP was officially notified on October 29, 2002.) According to U.S. officials, by early November, Zambia had rejected an additional 57,000 MT of biotech maize intended for its food aid beneficiaries. The combined 76,000 MT of maize considerably exceeded WFP's cereal shortfall for Zambia for the July through December period and would have fed 1.5 million Zambians for 3 months.<sup>33</sup> In the case of Zimbabwe, there were delays while the government debated whether to accept whole grain maize and then negotiated, developed, and put in place restrictions it deemed suitable. According to a U.S. official, at one point, more than 80,000 MT of U.S. whole kernel maize imports destined for Zimbabwe were delayed in South Africa and Mozambique port warehouses awaiting permits—while the food aid pipeline lacked cereal.
  - **Costs of food aid operations increased.** WFP, national governments, and other donors have borne the additional costs associated with requirements to mill some or all of the U.S.-donated maize. These costs include the milling itself, added charges for transporting whole grain maize to mills and for shipping milled product, added storage costs because of limited milling capacity, and grain losses associated with the milling process.<sup>34</sup> WFP estimates that when it has to mill the product in South Africa, regional distribution costs could total up to \$80 per metric ton more than for unmilled U.S. maize.<sup>35</sup>
  - **Logistics of the food aid effort were complicated.** Logistics became more complex because of (1) U.S. whole kernel maize piling up in ports as governments debated whether to accept biotech maize and, if so, under what conditions, (2) limited milling capacity, (3) added transportation and storage requirements, and (4) the short shelf life of maize milled regionally (3 months compared with 12 months for whole

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<sup>33</sup>According to WFP, 1 MT of cereal feeds approximately 60 people per month.

<sup>34</sup>Milling reduces the volume of the product. As a result, more whole grain maize must be supplied to meet the food needs of the beneficiaries.

<sup>35</sup>WFP's estimate of \$80 per MT represents the rule of thumb for maximum costs, which include extraction rates during milling, additional transport, bagging, fumigation, and drying, as well as additional oversight. Actual total costs for milling, however, could not be calculated because milling is integrated into the overall procurement and logistics network.

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maize). Because food is distributed to households on a monthly basis, WFP had to ensure that milled maize would not take more than 2 months to arrive at final distribution sites.

U.S. officials said that recipient countries in southern Africa did not make timely, informed decisions about whether to accept or reject biotech food aid. These officials also said the U.S. government does not have comprehensive data on which recipient countries are likely to accept or reject biotech food aid, nor does the U.S. government have a strategy for providing alternatives to biotech food to countries that may reject it. According to officials from State, USAID, and USDA, these problems are not confined to the southern Africa region but also have a global reach.

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## **Declining Support for Agricultural Sector and the HIV/AIDS Epidemic Pose Challenges to Emerging from Crisis into Sustained Recovery**

The major challenges to emerging from the current food crisis into sustained recovery include (1) a decline in agriculture sector investments; (2) limited scope of existing programs in agricultural development; and (3) the negative impact of the HIV/AIDS epidemic. Recognizing the need to address numerous challenges to move out of this crisis into recovery, the U.N. Secretary-General and several other key stakeholders have called for a comprehensive and targeted approach to break the pattern of recurrent food crises in Africa. The food outlook for the next crop year has improved, but without continuing efforts to respond to the region's problems, recurring food crises may be difficult to avoid.

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## Agriculture Sector Investments by Donors and Governments Have Declined

Since agriculture accounts for 70 percent of the labor force in Africa, investments that improve productivity in the agricultural sector have significant implications for food security and overall rural development. According to the International Food Policy Research Institute, a 1 percent increase in agricultural productivity would help 6 million more Africans raise their incomes above \$1 per day. However, data show declining investments in the agricultural sector as agricultural lending by the World Bank, the African Development Bank, and the International Fund for Agricultural Development has fallen. Similarly, agricultural spending by national governments and U.S. bilateral assistance for agricultural programs in the affected countries have declined.<sup>36</sup>

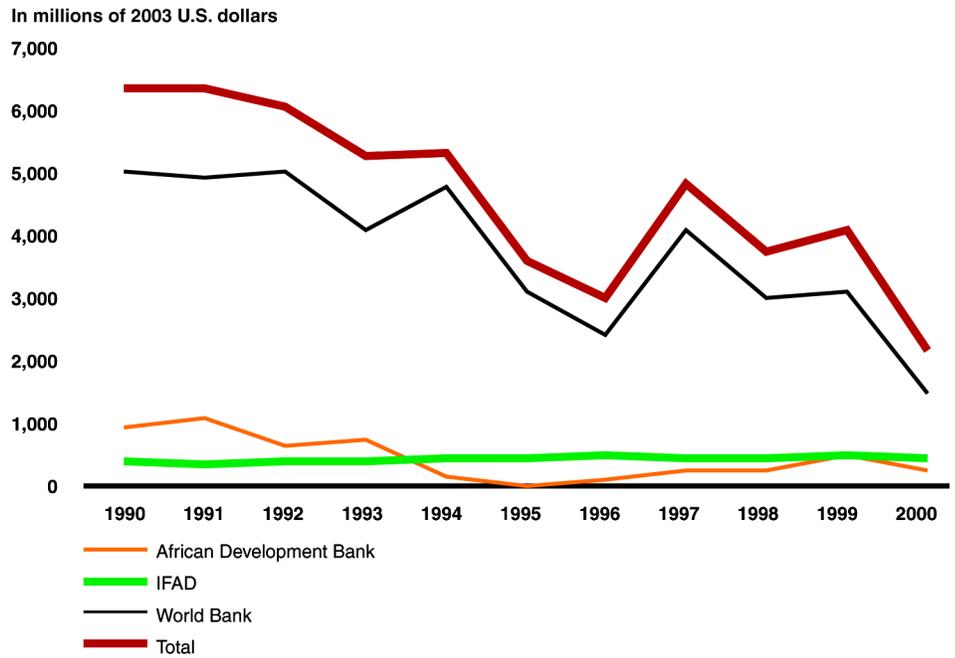
## Agricultural Lending by Selected International Financing Organizations

Total lending to the agriculture sector by selected international financing organizations declined during the 1990s. For example, measured in 2003 dollars, the African Development Bank approved about \$873 million in loans for agriculture in 1990 compared with \$236 million in 2000, as shown in figure 8. Similarly, the World Bank approved \$4.7 billion in loans for agriculture in 1990 compared with \$1.4 billion in 2000. Bank officials noted that the World Bank now approaches the agricultural sector in the context of the Bank's overall rural development strategy that includes, among other things, lending for rural infrastructure, rural health, and environment and natural resource management. For this reason, starting in 2001, the World Bank began to include agricultural investments as part of its rural development lending. However, this does not negate the overall declining trend in agricultural lending between 1990 and 2000.

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<sup>36</sup>The private sector is also a source of agricultural investment in terms of capital (farm machinery and equipment) and technology (seed, irrigation, and soil conservation). However, little or no data are available to determine the size, growth, and impact of private sector investments on agricultural production in these countries.

**Figure 8: Agricultural Lending by the World Bank, the African Development Bank, and the International Fund for Agricultural Development—1990 through 2000**



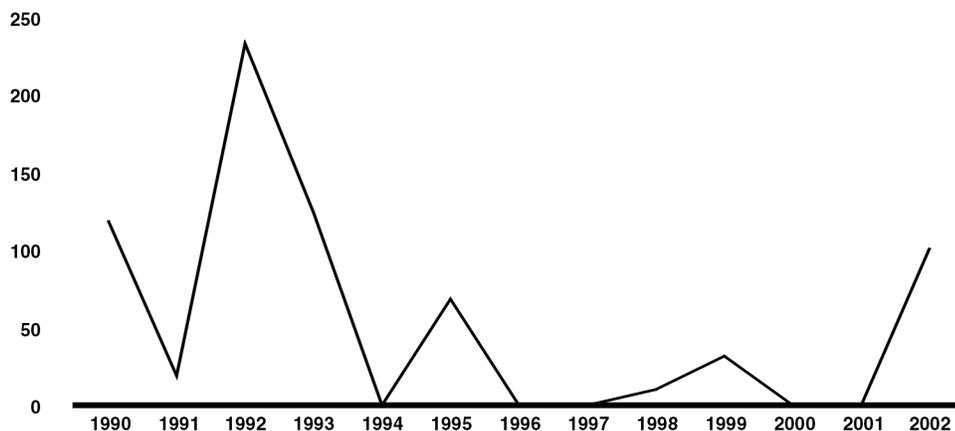
Source: GAO analysis of FAO, IFAD, and WFP data.

Note: IFAD provides strictly agricultural development loans.

Our review of World Bank agricultural loans to the six affected countries since 1990 found that 15 had been made—with 9 of them approved between 1990 and 1993. There were no loans recorded for Swaziland. As shown in figure 9, in 2002, the downward trend in World Bank agricultural lending to the affected region reversed with two \$50 million emergency drought recovery loans for Zambia and Malawi. These loans included an agricultural component but also comprised health, social services, and other emergency programs.

**Figure 9: World Bank Agricultural Sector Loans Approved for the Affected Countries—1990 to 2002**

In millions of 2003 U.S. dollars

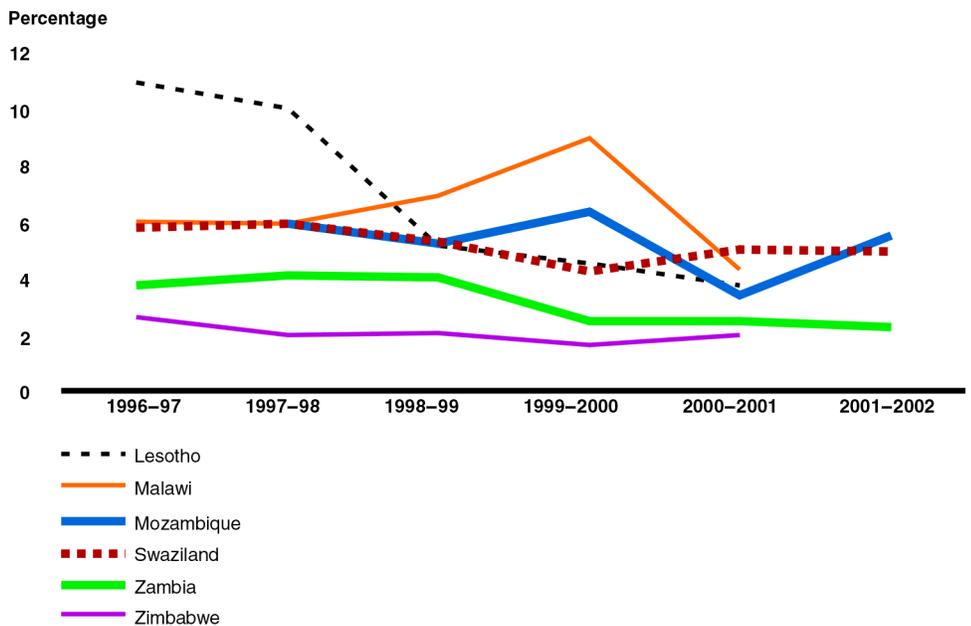


Source: GAO analysis based on data from World Bank annual reports.

## Agricultural Spending by National Governments

In general, national governments have been spending a declining share of their budgets on agriculture, as shown in figure 10. Real spending on agriculture has declined for two countries—Lesotho and Zambia—whereas total government spending has increased for all six affected countries. For the remaining countries, national government spending on agriculture has been stagnant or has grown at a slower rate than total government spending.

**Figure 10: Agricultural Spending as a Percentage of Total Government Spending—1996/97 through 2001/02 (in 2003 dollars)**



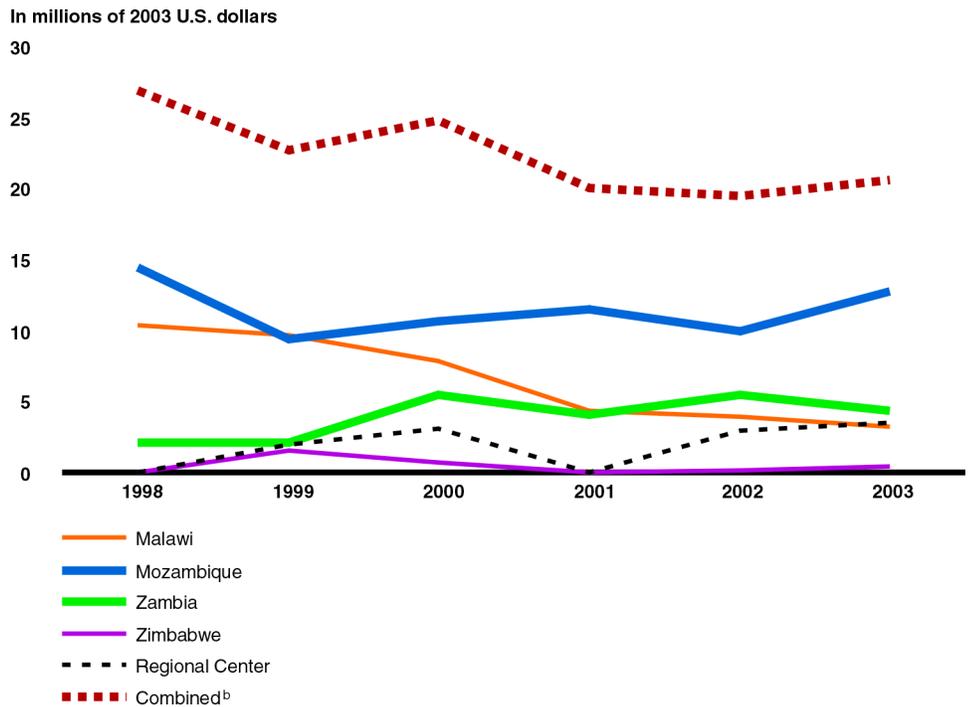
Source: GAO analysis based on data from IMF statistical appendices.

Note: 2001/2002 data for Lesotho, Malawi, and Zimbabwe were not available. We did not calculate the percentage of government spending for agriculture for Mozambique. The IMF provided us with the percentage data.

U.S. Bilateral Assistance for Agricultural Sector

Although the levels of U.S. bilateral assistance for agriculture by country have been mixed, overall assistance to the region's agricultural sector has declined from \$27 million in 1998 to \$20.6 million in 2003. The largest reductions were for Malawi, which went from \$10.3 million in 1998 to \$3.2 million in 2003, while assistance to Mozambique went from \$14.5 million in 1998 to \$12.8 million in 2003 (see fig. 11).

**Figure 11: USAID Bilateral Assistance in the Agricultural Sector to Four Countries<sup>a</sup>—1998 to 2003**



Source: GAO analysis of USAID data.

<sup>a</sup>USAID does not have bilateral programs in Lesotho and Swaziland. However, these two countries do benefit from some regional assistance and limited funding support through other U.S. government agencies.

<sup>b</sup>The combined figure includes Malawi, Mozambique, Zambia, and Zimbabwe. It does not include Regional Center funding.

Existing Programs Are Helpful but Limited in Scope

To promote agricultural development and work toward achieving food security, FAO, IFAD, and WFP advocate an approach that helps support small farmers, enhances the ability of the poor to access food, and aids

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recovery efforts (fig. 12 describes examples of some of the current programs). Several U.N. and USAID officials told us that while many of the programs they have funded have demonstrated promising results, the programs are limited in scope due to resource constraints and would need to be implemented on a much wider scale for greater impact and effectiveness.

**Figure 12: Examples of Existing Programs Related to Food Security**



Cassava multiplication program (Malawi).

**Improving crop diversification**

Agricultural experts have promoted programs to diversify crops that are good alternatives to maize, particularly in areas with erratic rainfall and adverse conditions. For example, in Malawi, FAO and USAID are supporting programs, such as the Southern Africa Root Crops Research Network, designed to multiply and distribute improved varieties of sweet potatoes and cassava. In addition, USAID-supported farmer associations throughout the country are promoting higher-value crops such as groundnuts and aromatic rice.



Seed input fair (Mozambique).

**Rebuilding assets**

Many farmers depleted their livestock and other assets during the crisis and have limited access to credit. During the crisis, several countries experienced shortages in agricultural inputs such as fertilizer, seed, and tools. Nonetheless, some governments and major donors did have programs to deliver basic agricultural inputs to small farmers to help boost agricultural production for the next growing season. For example, in Malawi, the government targeted 2 million farmers for free "starter packs" (primarily seeds). In addition, the United Nations reported distributing more than 177,000 packs of seed and tools but noted that funding constraints limited the amount of seeds distributed. Representatives of nongovernmental organizations, which focus their activities at the village level, stressed the effectiveness of such mitigation measures.



FAO-sponsored joint irrigation schemes (Mozambique).

**Developing better water management schemes**

Because the region lacks irrigation schemes, drought-affected areas included many villages that were close to significant water sources, such as Lake Malawi and the Zambezi river basin. FAO officials believe that, with better water management schemes, such villages should be able to collect and save water to mitigate drought. As part of its program of assistance, FAO helps farmers identify water management techniques and implement suitable low-cost solutions to increase agricultural production. FAO also promotes water users associations and appropriate irrigation support services to make water management sustainable.



Food for work programs help build rural infrastructure such as schools (Zambia).

**Rehabilitating rural infrastructure**

The lack of a functioning rural infrastructure often prevents farmers from marketing their crops. Donor and government officials in the region stress the need to rehabilitate the rural infrastructure. In Mozambique, USAID has programmed resources to rehabilitate farm-to-market roads and to construct the long-delayed final segment of the north-south trunk road. As a result, farmers and other residents along the road have found better access to markets. In 2001, according to a USAID report, sales of beans, maize, and cotton in some areas along the road alignment increased 20 percent over the previous year.



High water mark of the 2000-2001 flood on food warehouse wall (Mozambique).

**Improving emergency preparedness and disaster management**

In light of erratic weather conditions in the region, numerous officials cited the need to prepare for emergencies and manage disasters more effectively. According to many USAID, U.N., and host government officials, Mozambique has been better able to respond to the current food crisis than it was to the disastrous 2000-2001 floods because it developed a national plan that was put into effect at the national, provincial and district, and local community levels at the onset of the crisis. Among other things, the plan coordinated efforts in various sectors; prepositioned food stocks in strategic locations; and provided information to people in vulnerable areas.

Sources: GAO; photos, GAO (top and bottom 2 photos), all other photos, FAO.

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## Negative Impact of HIV/AIDS on Food Security Will Grow

In addition to being a significant factor that contributed to the food crisis, HIV/AIDS will continue to affect food security in the region by decreasing food production, lowering household income, and increasing household expenses, according to numerous experts. These effects will increase as the HIV/AIDS epidemic worsens. For example, by lowering the productivity of agricultural labor in its food supply model, USDA estimated that HIV/AIDS will cause a 3.3 percent reduction in grain output in sub-Saharan Africa over the next decade relative to the region's baseline projections. As a result, the projected food deficit will grow by 13 percent.<sup>37</sup>

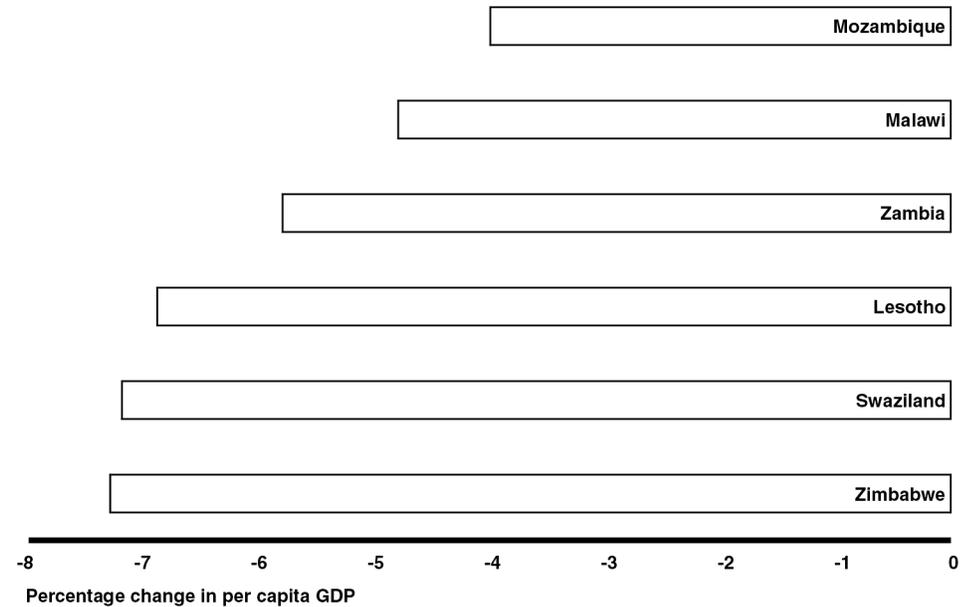
According to an IMF study, HIV/AIDS will also lower gross domestic product (GDP). Figure 13 shows the projected decrease in growth rates of GDP per capita attributable to HIV/AIDS in 10 to 15 years: Estimates range from minus 4 percent in Mozambique to about minus 7 percent in Zimbabwe. Projected average per capita GDP growth rates without HIV/AIDS range from 1.5 percent for Lesotho to 3.9 percent for Mozambique, indicating that the HIV/AIDS effect will significantly reduce national income.<sup>38</sup> In fact, for a typical sub-Saharan African country with HIV/AIDS prevalence of 20 percent, national income is estimated to be 67 percent lower at the end of a 20-year period than without the disease.

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<sup>37</sup>The projected food deficit is defined as the gap between projected domestically produced food supplies and projected food needs based on a basic nutritional requirement and projected population.

<sup>38</sup>GDP projections are from Global Insight's 2000 forecast and indicate annual growth rates from 2006 to 2020.

**Figure 13: Projected Impact on GDP Due to HIV/AIDS**



Source: Haacker, International Monetary Fund, 2002.

Note: Estimates are for an economy open to trade and are for a 10- to 15-year period with 2000 as the base year.

## U.N. Secretary-General and Others Cite Need for Integrated Response

Although the international response was sufficient to avoid famine in past food crises in the region—as well as the current one—food security continues to be a significant development challenge. U.N. and U.S. officials acknowledge that food aid and humanitarian assistance alone will not prevent future crises without a comprehensive recovery strategy that addresses the underlying causes of food insecurity. In our review, we found no evidence of such a strategy.

In March 2003, the U.N. Secretary-General noted that the devastating impact of HIV/AIDS requires an integrated response that may include long-term measures even when addressing short-term emergencies and called for a more systematic, targeted approach to break the pattern of recurrent food crises in Africa. Many other authoritative experts and key stakeholders have echoed the U.N. Secretary-General’s call for an integrated response. For example, in December 2002, SADC—the principal organization for regional cooperation in food and agriculture and related

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economic and social issues—acknowledged the need for political commitment at all levels within the region and for coordinated support from SADC, national governments, donors, nongovernmental organizations, and civil society to ensure food security in the future. Among those calling for a comprehensive response to address food security—one that integrates agricultural development, HIV/AIDS, natural disaster management, and other appropriate interventions—are the U.N. Office for the Coordination of Humanitarian Affairs, the International Food Policy Research Institute, and the Partnership to Cut Hunger and Poverty in Africa.

In recent years, international donors have announced major initiatives related to food security. These include plans not only to enhance food availability by increasing agricultural production but strategies to increase food accessibility by reducing poverty. For example, the United Nations' 2001 Millennium Development Goals pledged to help cut hunger in Africa in half by 2015.<sup>39</sup> The World Bank and IMF have worked with countries eligible for debt relief—Malawi, Mozambique, and Zambia—to ensure that food security and agriculture are central themes in these countries' Poverty Reduction Strategy Papers.<sup>40</sup> Among other measures, these strategy papers emphasize promoting small-scale irrigation, reducing land degradation, and improving access to credit and agricultural inputs. In early 2002, USAID introduced its Agricultural Initiative to Cut Hunger in Africa, which is designed to accelerate agricultural growth and reduce vulnerability to hunger and poverty. However, as of April 2003, of the six affected countries, only Mozambique was proposed for funding (\$3.9 million in 2003) under the initiative.

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<sup>39</sup>One of the key Millennium Development Goals is the eradication of extreme poverty and hunger and cutting in half between 1990 and 2015 the proportion of people whose income is less than \$1 a day and the proportion of people who suffer from hunger.

<sup>40</sup>These countries are required to develop Poverty Reduction Strategy Papers (PRSP) as the basis for assistance from the World Bank and IMF under the Initiative for Highly Indebted Poor Countries, where official creditors agree to help the most indebted countries obtain debt relief. In addition to these three countries, Lesotho has prepared an Interim PRSP and should issue a full PRSP this year.

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## Regional Food Outlook Remains Tenuous; Sustained Efforts Seen as Necessary

Despite improved weather conditions and a better harvest beginning in April 2003, food security conditions in the region are still tenuous. As of the end of March 2003, early warning systems were forecasting that some parts of the region may have better harvests than last year; however, they also note that food insecurity and the need for emergency aid persist—and may worsen—in some areas, particularly in Zimbabwe and parts of southern Mozambique. In February 2003, the U.N. Office for the Coordination of Humanitarian Affairs stated that, because the response to improve agricultural inputs has been inadequate, recovery by the next agricultural season is unlikely and the need for food aid prolonged. In fact, the current emergency operations, which were for the crop year that concluded March 2003, have been extended through June 2003. Beyond that, according to WFP and USAID officials, the need for food aid will likely continue, particularly for many of the poorest and most vulnerable households.

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## Conclusions

The current food crisis is complicated by disruptive agricultural and governance policies in the affected countries and the HIV/AIDS epidemic. While the WFP, the United States, some donor governments, and NGOs provided enough food to prevent a famine, overall donor response was insufficient in terms of food quantities and timeliness to prevent widespread hunger. In addition, other obstacles—including poor infrastructure in the affected countries and concerns associated with biotech food—hampered an effective response. The controversy about biotech food aid, in particular, significantly complicated logistics, increased costs, and delayed food aid reaching beneficiaries. Concerns about agricultural biotechnology may be an obstacle to addressing future emergency food aid needs around the world, partly because the United States accounts for about half of global food aid and because several U.S. food aid commodities are genetically modified. Action is needed to reduce the likelihood of biotech food aid becoming a serious problem in future crises. Furthermore, in a region where agricultural production is critical to national economies and food security, there is a need for viable agricultural policies and funding by national governments, as well as adequate agricultural assistance and related strategies from multilateral organizations and donors, including the United States. Without a concerted strategy that integrates, among other things, agricultural development, the impact of HIV/AIDS, and natural disaster management, destabilizing food crises are likely to recur.

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## Recommendations for Executive Action

To maximize the effectiveness of the U.S. response to future food crises in the southern Africa region as well as in other parts of the world, we recommend that the Secretaries of State and Agriculture and the Administrator of USAID initiate a comprehensive review of the issues pertaining to biotech foods in emergency food aid. In anticipation of future food crises, this review could consider measures such as (1) encouraging recipient countries to enhance their capacity to make informed decisions regarding agricultural biotechnology and offering technical assistance in this endeavor; (2) identifying which countries are likely to accept, restrict, or reject biotech food aid; and (3) determining ways that the United States can contribute to emergency food aid needs in countries that decide to restrict or reject biotech food aid.

To further food security in the region, we recommend that the Secretaries of State and Agriculture and the Administrator of USAID work with international organizations, donors, and national governments to develop a comprehensive, targeted strategy to ensure sustained recovery that (1) integrates agricultural development, HIV/AIDS awareness and action, natural disaster management, and other appropriate interventions; (2) estimates costs and resource requirements; and (3) establishes a plan for mobilizing resources, a timetable for achieving results, and indicators for measuring performance.

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## Agency Comments and Our Evaluation

The Department of State, USDA, USAID, and WFP provided written comments on a draft of our report. These comments are reprinted in appendixes VIII, IX, X, and XI, along with our responses to specific points.

In general, the Departments of State and Agriculture, USAID, and WFP agreed with our overall conclusions and recommendations. However, they expressed technical concerns, primarily related to our discussion of biotech food, which we have addressed in the text as appropriate.

USDA objected to our use of the term “biotech food,” saying it prefers “foods which may contain the products of agricultural biotechnology.” USDA also said that it opposes the use of the term “genetically modified organisms” and the acronym “GMO” because these terms carry negative connotations. According to the department, modern agricultural biotechnology is simply the next step in plant breeding technology. Notwithstanding USDA’s comments, FAO, WHO, and WFP use the terms genetically modified food, GM food, and biotech food. In fact, after

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receiving USDA's comments, we found that USDA was still using the terms "biotech plants" and "biotech crops" in some of its publicly available informational materials. USAID objected to our use of the term "biotech food aid," noting that the United States provides food aid from the general U.S. food supply, which may contain biotech crops. In certain places, we now refer to U.S. food aid as aid that may contain biotech crops.

In commenting on our recommendation to initiate a comprehensive review of the issues associated with biotech foods in emergency food aid, USDA said that it agrees that all relevant parts of the U.S. government must continue to review and engage other countries regarding their biotech policies, including those related to food aid. USDA said it will continue to support developing countries' efforts to enhance their capacity for making science-based and transparent decisions regarding products of modern agricultural biotechnology. At the same time, USDA said it is difficult to accurately identify countries that might accept or reject products of modern agricultural biotechnology because many developing countries' policies depend upon the specific political, economic, and social circumstances at the time.

The Department of State said that an interagency review on how to manage the presence of bioengineered foods in food aid might be useful for developing a strategy. However, the department said that such a review should be narrowly focused to ensure better coordination among food aid, development, trade policy and regulatory agencies. USAID said it supports further interagency discussion and coordination on the dimensions of biotechnology in food aid. USAID noted that it is actively engaged in supporting the development of capacity in a number of food aid recipient countries to make informed decisions, but said in practical terms this is a long-term strategy and unlikely to assist in emergency situations such as we saw in southern Africa. USAID said it believes that the most practical solution will be to work with recipient governments and partners involved in the delivery of food aid to build confidence in the existing safety evaluations of these products, including evaluations done in the United States and by other countries, scientists, and international organizations such as FAO and WHO.

Regarding our recommendation to develop an integrated recovery strategy, the Department of State, USAID, and WFP fully support the need for a comprehensive, coordinated approach to help address the underlying causes of food insecurity. State cited U.S. efforts to work with major donor countries to create a multilateral framework for improving long-term food

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security throughout the world. USAID said that, along with an interagency working group formed by the sub-policy planning committee to coordinate the U.S. government response to the food crisis, it is in the process of drafting a recovery strategy and action plan, which will guide the development and review of new USAID country strategies in the region. WFP emphasized the need for the international community to remain engaged within the region and to help national governments address medium- to longer-term issues related to food insecurity. We agree that such efforts must be sustained if destabilizing food crises are to be avoided.

In addition, we provided FAO, IMF, and the World Bank an opportunity to review parts of a draft of this report for technical accuracy, and we incorporated their comments as appropriate.

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We are sending copies of this report to appropriate congressional committees, the Secretaries of State and Agriculture, and the USAID Administrator. Copies will be made available to others upon request. In addition, this report will be available at no charge on the GAO Web site at <http://www.gao.gov>.

If you or your staff have any questions about this report, please contact me on (202) 512-3149. Other GAO contacts and staff acknowledgments are listed in appendix XII.

Sincerely yours,

A handwritten signature in black ink, appearing to read "David Gootnick". The signature is fluid and cursive, with a large initial "D" and "G".

David Gootnick  
Director, International Affairs and Trade

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# Scope and Methodology

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To determine what factors contributed to the current crisis in southern Africa, we met with and analyzed information from government officials at the U.S. Agency for International Development (USAID) and the Departments of Agriculture (USDA) and State in Washington, D.C., and U.S. missions in Botswana, Malawi, Mozambique, Zambia, Zimbabwe, and South Africa. We also met with officials and reviewed information from the World Food Program (WFP), the Food and Agriculture Organization (FAO), and the International Fund for Agricultural Development (IFAD) at their headquarters in Rome and in the southern African countries we visited. In addition, we gathered information from and met with representatives of the World Bank and the International Monetary Fund (IMF), other U.N. agencies, other donor governments, and host government ministries. We also gathered information and met with representatives of early warning systems and interagency food security assessment teams. In addition, we gathered information and met with representatives of nongovernmental organizations (NGO), including Africare, Bread for the World, the Coalition for Food Aid, CARE, Catholic Relief Services, the Coalition for Food Aid, Save the Children, World Vision, and ACDI/VOCA. We also reviewed studies from public and private research institutions on the causes of the current and past food crises in southern Africa.

To determine how well the populations' overall food needs were met during the crisis period, we met with officials and reviewed information from WFP, FAO, host governments, the private sector, donor governments, NGOs, and the Southern African Development Community (SADC). We also met with and gathered information from representatives of interagency famine early warning and vulnerability assessment teams. In addition, we analyzed country-specific and regional WFP food aid data tracking food aid flows from donors (through WFP and NGOs) to the country level and, for WFP food aid, to the beneficiary level. Because of southern Africa's infrastructure and technology problems, our collection and analysis of agricultural supply and demand information had inherent limitations. We observed food aid distribution at various stages including at the points of entry and storage facilities at the extended delivery points and final distribution points. We met with WFP, NGO, donor, national government, and local government officials responsible for managing and monitoring the food aid distribution process. We reviewed WFP's real time logistics information system including its monitoring and loss reports. We also reviewed U.S. and other donor financial contributions to determine similar information on nonfood aid-related assistance. We verified the accuracy of data and reports, to the extent possible, by tracing the flow of

information and obtaining comparable data from multiple government, international organization, NGO, and private sector sources.

To determine the major obstacles to the food aid effort, we met with key officials and gathered and examined data from governments and the private sector in recipient countries, WFP, donor governments, NGOs, and SADC on the rate and amount of donor contributions, infrastructure, and biotech food aid and its impact on food aid distribution in the current crisis. We examined U.S. and other donor funding of WFP's EMOP, reviewing actual country donations against pledges to determine the sufficiency and timeliness of donations. We reviewed and examined data on the transportation network for moving food in the region and identified and confirmed transportation and infrastructure obstacles during our fieldwork in country. We verified and confirmed the general accuracy of these data through multiple private sector and governmental organizations. With the assistance of the National Academy of Sciences, we had seven U.S. scientists provide an independent perspective on the *Zambian Scientists' biotech report*.

To determine the challenges to emerging from the crisis into sustained recovery, we met with numerous NGOs, the World Bank, the IMF, USAID, and the Departments of Agriculture and State and analyzed information on the decline in agricultural sector investment, the limited scope of existing programs in agricultural development, and the negative impact of the HIV/AIDS epidemic. In addition, we reviewed studies from private and public research institutions, such as the International Food Policy Research Institute, on the challenges to moving from crisis into recovery. We also analyzed agricultural funding data of the six southern African national governments. To analyze World Bank agricultural lending, we reviewed World Bank annual reports and its Web site from 1990 to 2002 to determine the amount and nature of loans made to the six affected southern African countries. After identifying the loans, we calculated an average deflator for each fiscal year (July to June) and calculated the 2003 value of each of these loans. To analyze the percentage of government budgets expended for agriculture, we gathered fiscal data for each of the six countries from the IMF country statistical appendices for 1997 through 2002. We then calculated the current and capital expenditures from agriculture as a share of the total current and capital expenditures in the government budget. We also calculated the real growth rate using least square regression methodology for agricultural and total spending. Finally, to determine the impact of HIV/AIDS on food security among the six

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affected countries, we reviewed USDA and IMF studies that quantified the food security situation and its economic implications.

The information on foreign laws in this report does not reflect our independent legal analysis but is based on interviews and secondary sources.

We conducted our review from August 2002 through May 2003 in accordance with generally accepted government auditing standards.

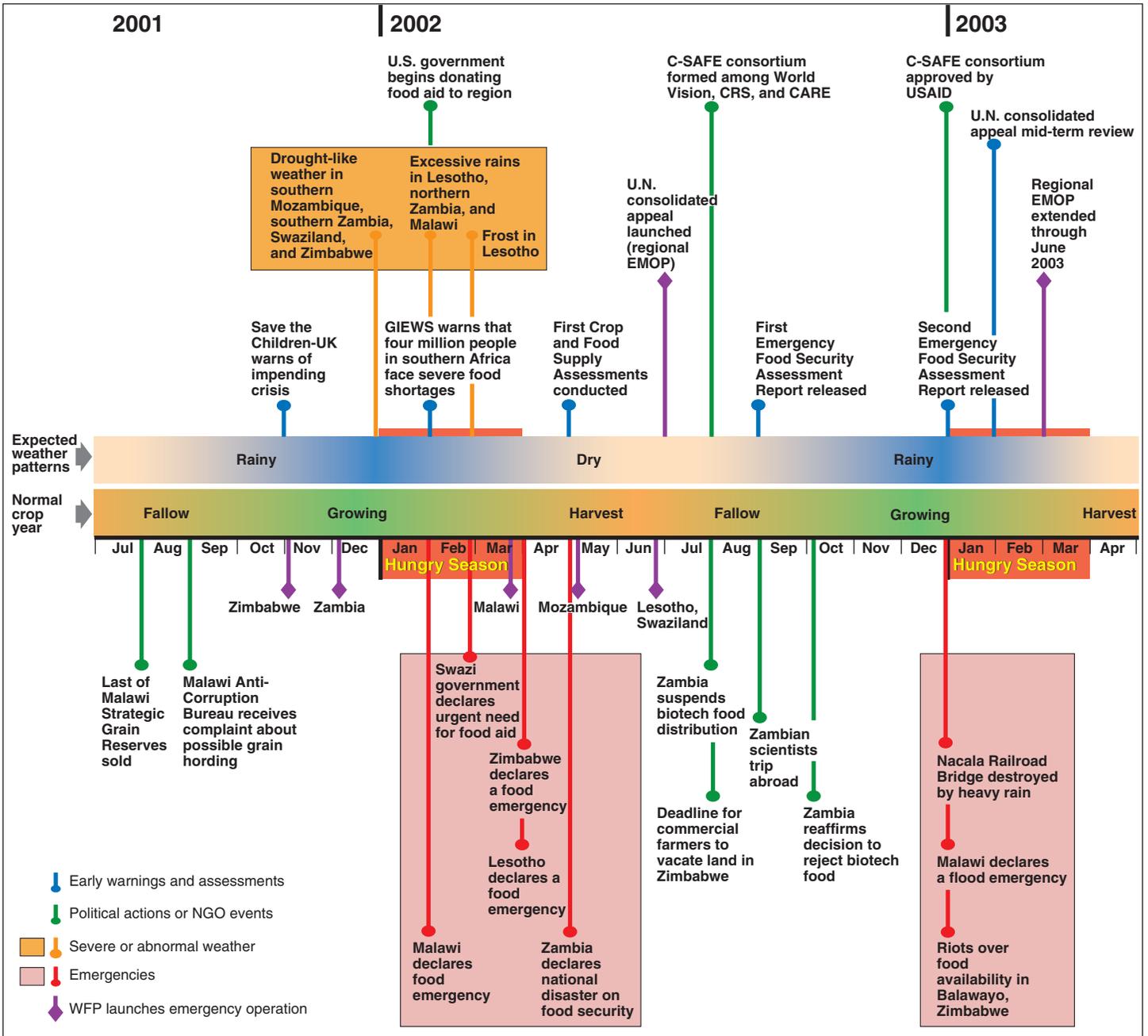
# Timeline of the Southern Africa Food Crisis

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Figure 14 is a chronology of key events (political actions, alerts, and emergencies) that occurred in the region and in some of the affected countries during the 2-year period from July 2001 through April 2003.

Appendix II  
Timeline of the Southern Africa Food Crisis

Figure 14: Timeline of the Southern Africa Food Crisis



Source: GAO.

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# Early Warning Systems and Vulnerability Assessment Methods

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Two types of data collection systems tracked the food crisis in southern Africa: (1) early warning systems, which monitor factors that affect food supply to provide decision makers with notice of potential crises; and (2) assessment systems, which monitor the nutritional needs of vulnerable populations in order to design or assess interventions.

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## Early Warning Systems

Famine early warning systems are designed to provide decision makers with information of an impending food crisis or famine. These systems compile various indicators of food security at a regional, national, or subnational scale, including information on weather and household purchasing power. While early warning systems are useful, preventing food crises depends on timely responses to the information they disseminate.

For this report, we reviewed two early warning systems:

- **FEWS NET:** The Famine Early Warning System (FEWS) is a specialized Information Network (NET) based in 17 African countries contending with chronic food insecurity.<sup>1</sup> FEWS NET is a partnership-based program initiated and funded by USAID. The goal of FEWS NET is to strengthen the ability of African countries and regional organizations to manage risk of food insecurity by providing timely and analytical early warning and vulnerability information. FEWS NET monitors information from multiple technologies, such as satellites and field observations, and seeks to facilitate timely access to that information; identifies specific, acute food security threats; and provides regular information assessments to decision makers that reflect the best judgment of the food security community.
- **GIEWS:** FAO's Global Information Early Warning System on Food and Agriculture (GIEWS) is an information system based in Rome that includes 116 governments, 3 regional organizations, and 61 nongovernmental organizations. The goal of GIEWS is to provide the international community with warning of imminent food crises to ensure timely interventions in countries or regions affected by natural or man-made disasters. The system seeks to monitor all aspects of food supply and demand in all countries on a continuous basis at the global, regional/subregional, national, and subnational levels. It reports to the

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<sup>1</sup>Burkina Faso, Chad, Eritrea, Ethiopia, Kenya, Mali, Malawi, Mauritania, Mozambique, Niger, Rwanda, Somalia, Southern Sudan, Tanzania, Uganda, Zambia, and Zimbabwe.

international community through its system of regular and ad hoc reports.

FEWS NET and GIEWS often contribute to the WFP/FAO Crop and Food Supply Assessment Missions. Additionally, FEWS NET supplies GIEWS with the major proportion of its remote-sensing data for monitoring agricultural production. However, according to USAID, these two early warning systems differ in three main areas:

- **Geographic scope:** FEWS NET has a 17-country scope in Africa, whereas GIEWS has a global mandate.
- **Level of detail:** FEWS NET reports on the subnational level based on information gathered by field staff located throughout their scope, whereas GIEWS reports on the national and global levels from their headquarters in Rome with few field staff.
- **Technical focus on food security:** FEWS NET focuses on food availability, access, and utilization, while GIEWS focuses on food production and availability.

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## Early Warning Systems in the Southern Africa Food Crisis

The famine early warning systems produced relevant information regarding the southern Africa food crisis. FEWS NET and GIEWS reported on such food security indicators as adverse weather events, current food shortages, the status of cereal imports, the status of strategic grain reserves, the status of grain prices, and forecasts for the 2001/02 harvest.

In particular, in late 2001 and early 2002 the early warning systems reported questionable food security in parts of the six countries, accounting for the poor 2000/01 harvest and anticipating future cereal gaps based on a poor outlook for the 2001/02 harvest. In November 2001, FEWS NET reported that the 2000/01 cereal harvest from earlier that year would likely be insufficient to fill food needs in each country except Mozambique. After FEWS NET highlighted these potential maize shortages, the U.S. government began carefully monitoring the situation in southern Africa, according to a Department of State cable. By mid-February 2002, GIEWS warned that impending severe food shortages threatened some 4 million people in the southern African countries, including parts of each of the six countries. That same month, however, FEWS NET reported that although there were localized areas of concern at the national and subnational levels, there was no reason for serious concern over production prospects

from a *regional* perspective at that point in the growing season. In April 2002, closer to the harvest period, GIEWS warned of a looming food crisis in southern Africa, with conditions in several countries set to worsen. By May 2002, FEWS NET also warned of the potential for a food security crisis of regional magnitude if appropriate and timely action were not taken.

Nevertheless, the early warning systems did not anticipate the severity of the situation in Malawi. Although the systems did report serious maize (corn) production shortfalls in Malawi during the 2000/01 harvest caused by mid-season floods and late-season drought, flawed agricultural statistics provided by the government of Malawi<sup>2</sup> indicated that the production shortfall would be covered by other food crops, especially cassava. According to the IMF, the data error only became apparent in February 2002 when Malawi began experiencing severe food shortages.

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## Assessment Systems

For this report, we reviewed the following assessments:

- **VAM:** The Vulnerability Analysis and Mapping Unit (VAM) analyzes, maps, and reports on populations and geographic areas experiencing food insecurity to inform WFP food aid operations in 43 countries. VAM uses state-of-the-art mapping techniques to pinpoint the people most vulnerable to hunger and target their needs. VAM and FEWS NET work in close collaboration in the African countries where they are both present. VAM relies on FEWS NET for early warning analyses in most African countries. VAM also has a global mandate in supporting internal WFP operations, whereas FEWS NET attempts to build assessment capacity within the countries.
- **CFSAM:** Crop and Food Supply Assessment Mission (CFSAM) is a rapid assessment of information generated in an affected country used to fill in information gaps and to provide an early forecast of production and the emerging food supply situation of that country. This is done only at the request of the host country government. A mission may also collect information on household food security, vulnerability, coping mechanisms, and social welfare programs. GIEWS/FAO coordinates such missions in conjunction with WFP and other stakeholders such as host country ministerial staff, FEWS NET staff, and the Southern

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<sup>2</sup>Early warning systems often rely on data supplied by the governments of the countries in question.

African Development Community's (SADC) Regional Early Warning Unit (REWU). CFSAM targets a wider audience than WFP's internally focused VAM unit. The international community uses the CFSAM information to calculate how much food aid and other relief assistance is needed to assist the most vulnerable people.

- **VAC:** SADC and some of its member states established vulnerability assessment committees (VAC) to better assess and address food security issues.<sup>3</sup> The purpose of VAC assessments is to (1) provide additional information to help adjust response programs to better meet the needs of vulnerable populations; (2) rapidly investigate and characterize or verify suspected crises in local areas; and (3) better understand the causes of the emergency and their implications for a return to food security. The committees use a coordinated, collaborative process that integrates the most influential assessment and crisis response players into the effort to help gain privileged access to national data sets and expert technicians and increase the likelihood of reaching consensus among national governments, implementing partners, and major donors. Key players include the SADC Regional Early Warning Unit and national VACs, VAM, FEWS NET, GIEWS, and several NGOs. The assessment methodology included sample surveys at the district, community, and household levels and incorporated household food economy and nutritional surveys.

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## Use of Assessments in the Southern Africa Food Crisis

Several of the above assessments have been used to prepare for and monitor the southern Africa food crisis (see app. II for timeline). FAO conducted a series of CFSAMs starting in May 2002. The missions estimated cereal requirements and cereal production for each of the six countries and the extent to which the gap could be offset by commercial imports. (See app. V for more on commercial sector imports and their role in the crisis.) The remaining deficit was identified as requiring emergency food aid. The regional and national VACs built assessment capacity in the region and increased the breadth and depth of food security monitoring

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<sup>3</sup>The SADC Vulnerability Assessment Committee, established in early 1999, is a committee of national professionals working at the regional level to enhance food security and livelihood conditions within the SADC member states. In August 2001, SADC Ministers of Agriculture encouraged member states to establish cross-sectoral and interagency vulnerability assessment groups to better understand food security and livelihood conditions of vulnerable communities and better target emergency and development interventions. The SADC VAC coordinates and backstops the national committees.

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**Appendix III  
Early Warning Systems and Vulnerability  
Assessment Methods**

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during the crisis. To this end, the committees conducted assessments and prepared reports on their results in September 2002 and January 2003. A third assessment occurred in May 2003.

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# U.S. Donations

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By early 2002, the United States had recognized the seriousness of the developing food crisis in southern Africa and initiated actions to donate substantial quantities of food aid to the region. For example, in mid-February 2002, USAID arranged a loan of 8,470 metric tons (MT) of maize to southern Africa from stocks held in Tanzania; the commodity began arriving in the region in mid-March. On March 15, 2002, USAID authorized World Vision to provide 14,310 MT of food aid to Zimbabwe (the amount was later increased to 19,710 MT). On March 21, USAID authorized the purchase of 35,330 MT of commodities—from existing stocks in New Orleans—to be shipped to southern African ports; these stocks arrived by the end of June 2002.

Overall, between late April 2002 and March 31, 2003, the United States donated and delivered nearly 500,000 MT of food aid to the region valued at about \$275 million. The food represented approximately 68 percent of the total food aid delivered into the region between April 1, 2002, and March 31, 2003.<sup>1</sup> U.S. deliveries included:

- 81,950 MT for precursor WFP emergency programs in each of the six countries—Lesotho, Malawi, Mozambique, Swaziland, Zambia, and Zimbabwe, valued at \$43 million;<sup>2</sup>
- 19,710 MT for the World Vision program in Zimbabwe, valued at \$12.8 million;
- 326,553 MT for the WFP regional operation, valued at \$165.4 million; and
- 71,600 MT for the C-SAFE operation, valued at \$53.5 million.

Table 4 provides a breakout of the U.S. food aid by country and commodity. As the table shows, Zimbabwe, Malawi, and Zambia received the largest amounts of aid. Maize (corn) and maize meal accounted for more than 70 percent of the donated commodities. About 84 percent of all the donated food represented biotech commodities (i.e., maize, maize meal, oil, and corn soya blend (CSB)/corn soya milk(CSM)).

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<sup>1</sup>The U.S. contribution to the southern African region was consistent with its global food aid performance in recent years. For example, from 1992 through 2001, the United States accounted for an average 58 percent of global food aid deliveries, ranging between 45.9 percent in 1995 and 68.8 percent in 1999.

<sup>2</sup>Together, the six operations were designed to assist 4.8 million people.

**Appendix IV  
U.S. Donations**

**Table 4: U.S. Government Food Aid Response to the Southern Africa Crisis**

<b>Country</b>	<b>Corn</b>	<b>Corn meal</b>	<b>Beans</b>	<b>Oil</b>	<b>Corn soy blend/corn soy milk</b>	<b>Sorghum</b>	<b>Bulgur</b>	<b>Total</b>
Lesotho	23,500	2,510	800	950				<b>27,760</b>
Malawi	114,650	8,500	8,720	4,720	14,905			<b>151,495</b>
Mozambique	13,000		2,680	2,860	1,250			<b>19,790</b>
Swaziland	11,500		700	725	2,617			<b>15,542</b>
Zambia	26,500	9,600	7,900	100	400	15,000	15,000	<b>74,500</b>
Zimbabwe	90,800	56,510	17,120	11,946	24,030		10,000	<b>215,406</b>
<b>Total</b>	<b>279,950</b>	<b>77,120</b>	<b>37,920</b>	<b>21,301</b>	<b>43,202</b>	<b>15,000</b>	<b>25,000</b>	<b>499,493</b>

Source: USAID.

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# Commercial Imports

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The extent and availability of commercial cereal food supplies during the food crisis<sup>1</sup> are difficult to assess for a number of reasons. Early concerns about the progress of commercial imports stemmed from the large amounts of cereal imports needed, the high regional prices for maize,<sup>2</sup> and the lack of sufficient foreign exchange resources for governments and private sector entities to purchase the required imports.<sup>3</sup> Nonetheless, data available in mid-May 2003 indicated that 1.72 million MT of commercial cereal imports had been received in the six countries between April 1, 2002, and March 31, 2003.<sup>4</sup> However, the regional Vulnerability Assessment Committee September 2002, December 2002, and January 2003 reports indicated some serious problems with food availability during the year. (See app. III for a detailed description of the VACs.) Factors contributing to the uncertainty over commercial cereal food supplies included the lack of time frames indicating when imports needed to be purchased, data reliability issues, problems between urban and rural distribution of food supplies, and government policies that provided disincentives to the private sector to import food or that, once imports were received in country, discouraged the efficient supply of those goods to the local market.

In contrast to WFP's food aid effort, the CFSAMs did not identify the monthly rate at which imports needed to occur, making it difficult to judge

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<sup>1</sup>One factor that reportedly affected the availability of commercial imports was the drop in maize production in South Africa, a primary supplier of maize to regional markets. South Africa's average maize production in 2001 and 2002 was 9 percent lower than the previous 5-year average (from 1996 to 2000).

<sup>2</sup>Maize prices fluctuated throughout the season and region. In Malawi, maize prices reached unprecedented levels during the pre-harvest period. In Zimbabwe, the price of maize on the black market rose by 167 percent from August to December. In Mozambique, November 2002 prices were generally higher than 2001 prices in four of seven provinces surveyed, but the same or lower in the other three provinces.

<sup>3</sup>The January 2003 VAC regional report concluded that Zimbabwe faced the greatest challenge of the six countries for purchasing required imports. Zimbabwe has been experiencing an economic crisis as its annual inflation rate has reached 180 percent and its gross domestic product has declined by 12 percent in 2002.

<sup>4</sup>The May 2002 FAO/WFP CFSAM initially estimated the annual cereal deficit for each country and how much of that could be met by commercial imports, with the remainder to be offset by emergency food aid. Subsequent VAC reports updated estimates of the cereal deficit as well as domestic cereal and stock requirements and production. Given that the U.N. regional emergency food aid appeal used the original CFSAM emergency food aid targets, we derived the annual commercial import requirement by subtracting planned emergency food aid from the March 2003 revised cereal deficit.

the timeliness of commercial imports. The September VAC report for Zambia indicated concern that it could be difficult for importers to find maize in regional markets (as several countries in the region had large deficits and would be competing to buy from the same suppliers), which in turn could delay purchases. According to the December VAC report for Lesotho, maize, wheat, and sorghum were generally not available for purchase at the end of the year in communities across that country. In Swaziland, maize was reported to be readily available in retail outlets nationwide even though there had been no commercial imports between July and November. However, there were fears that a shortfall in maize imports would occur between December and March, causing another round of price hikes.

Once data on commercial cereal imports began to be available, data reliability became an issue in some cases. For example, according to the December Zimbabwe VAC report, figures on the combination of commercial imports, food aid imports, and available national production should have resulted in a surplus of 200,000 MT at the national level. However, the report indicated there was something seriously wrong with the numbers, since 41 percent of communities surveyed reported that cereal grains were not or were rarely available from the government's grain marketing board and the other 59 percent reported that the grains were only occasionally available. U.S. government officials noted that there have been numerous anecdotal reports of the government's politicizing food aid, which may partly explain some of the discrepancy.

While commercial cereal imports may have been provided to urban markets, shortages were reported in many rural areas, indicating problems with the distribution of commercial cereal supplies. The December VAC report for Lesotho indicated that maize meal—maize that has undergone the milling process—was said to be available, though very expensive, in the various urban centers but generally not available in the rural areas, which were characterized as experiencing a serious food crisis. The January VAC report for Zambia said there was no commercial shortfall in urban areas and millers did not expect one through February and beyond. However, most of the maize that had been imported (officially or via cross-border trade) was reportedly only servicing the urban markets, leaving the rural areas with a severe commercial grain shortfall that drastically pushed up prices. Of 48 villages surveyed, fewer than 10 percent said maize was readily available and fewer than 30 percent said maize was occasionally available.

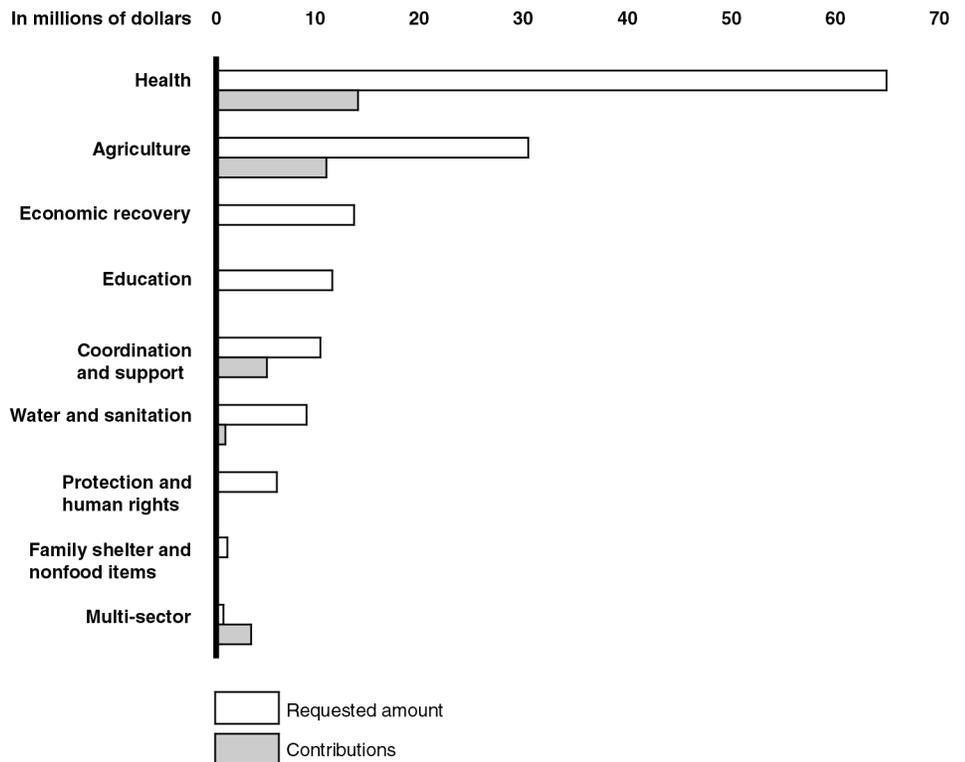
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Finally, some national governments implemented subsidies and price controls that raised concern about private sector imports and whether imports received would be supplied to local markets efficiently. For example, in response to the crisis, Malawi implemented a countrywide subsidy on the consumer price of maize to make it more affordable to the public. However, this policy, combined with high interest rates that inhibited the private sector from borrowing to cover its purchases, meant that the private sector could not profit from importing maize and selling it at the subsidized price. In Zambia, the government encouraged a program whereby a private sector group, the Millers Association, would import 300,000 MT of maize without having to pay import duties and the government would import 155,000 MT of maize to begin a strategic reserve. However, the Zambian government reportedly provided conflicting information about the amount of food it was to import for relief versus strategic reserves, thus causing confusion about planned imports, uncertainty over market prices, and conditions favorable for market speculation. In Zimbabwe, the government banned all private sector imports and implemented price controls on maize. This policy reportedly encouraged traders with food supplies to stockpile them or sell them at a much higher price on black markets in country or across borders.

# Nonfood Emergency Needs

U.N. agencies requested \$143.7 million to address urgent, nonfood humanitarian needs that increased people’s vulnerability to famine for the July 2002 through June 2003 period. As of April 9, 2003, less than 25 percent of the total identified requirements had been funded. Figure 15 compares the sectors and dollar amounts for which the U.N. agencies requested funding to actual contributions. As the figure shows, the largest amounts were requested for health, agriculture, and economic recovery. Only five of the nine sectors received any funding and four of these were only partially funded. The four sectors with the highest rates of funding were: multi-sector, 583 percent of the requested amount; coordination and support services, 49 percent of the requested amount; agriculture, 35 percent; and health, 21 percent.

**Figure 15: U.N. Nonfood Emergency Appeals and Contributions by Sector**



Source: GAO analysis of U.N. data.

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Funding requests were tied to specific projects. For example, the World Health Organization (WHO) asked for \$2.9 million for projects in Malawi to enable earlier detection of epidemics, improve response to disease outbreaks in emergency situations, and strengthen emergency health coordination. FAO requested funding for an \$8.5 million project in Zimbabwe to (1) increase agricultural production among 400,000 vulnerable households by providing inputs such as seeds and fertilizer, (2) facilitate tillage, (3) rehabilitate local water sources, and (4) develop opportunities to market agricultural products.

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# Biotech Food and the Southern Africa Food Crisis

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This appendix provides additional information on crops and foods produced with modern agricultural biotechnology, how concerns about agricultural biotechnology developed in southern Africa, and how issues surrounding agricultural biotechnology affected delivery of U.S. food aid during the southern Africa food crisis.

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## Modern Agricultural Biotechnology

Modern agricultural biotechnology refers to various scientific techniques used to modify plants, animals, or microorganisms by introducing in their genetic makeup genes for specific desired traits, including genes from unrelated species. Genetic engineering techniques allow development of new crop or livestock varieties, since the genes for a given trait can be introduced into a plant or animal species to produce a new variety incorporating that specific trait. Additionally, genetic engineering increases the range of traits that can be introduced in new varieties by allowing genes from totally unrelated species to be incorporated into a particular plant or animal variety.<sup>1</sup>

Crops and foods containing or derived from genetically modified (GM) plants have been characterized by various users as biotech, GM, genetically modified organisms (GMO), and bioengineered crops and foods.

Biotech crops currently on the market are mainly aimed at increasing crop protection by introducing resistance against plant diseases caused by insects or viruses or by increasing tolerance to herbicides. Biotech crops have lowered pest management costs and enhanced yields. By the end of 2000, such crops had been planted on nearly 100 million acres worldwide. As of 2000, the United States had 76.7 million acres of biotech crop varieties: 26 percent of all maize planted, 68 percent of cotton, and 69 percent of soybeans.

The United States and a number of other countries have established regulatory processes for assessing whether foods derived from agricultural biotechnology are as safe for humans, animals, other plants, and the environment as their traditional counterparts. Safety assessments of GM foods investigate direct health effects (toxicity), tendencies to provoke allergic reaction, nutritional effects, and any unintended effects that could

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<sup>1</sup>U.S. General Accounting Office, *International Trade: Concerns Over Biotechnology Challenge U.S. Agricultural Exports*, [GAO-01-727](#) (Washington, D.C.: June 15, 2001).

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result from gene insertion.<sup>2</sup> Environmental assessments consider the ability of the GMO to escape and potentially introduce the engineered genes into wild populations; susceptibility of nontarget organisms (e.g., insects that are not pests) to the gene product; loss of biodiversity; and increased use of chemicals in agriculture. The environmental aspects vary considerably according to local conditions.

GM food such as whole kernel maize seed contains living modified organisms (LMO) that are capable of transferring or replicating genetic material. If maize is milled, this is no longer the case. Whole kernel maize seed can be eaten as a food or planted to grow a new crop.

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### Challenges to U.S. Agricultural Exports Containing Biotech Commodities

U.S. agricultural biotech exports have faced several significant challenges in international markets. First, as the single, major producer of biotech products, the United States has been relatively isolated in its efforts to maintain access for these products.<sup>3</sup> Second, in many parts of the world, consumer concerns about the safety of biotech foods have increased, leading key market countries to implement or consider regulations that may restrict U.S. biotech exports. Third, in the United States, biotech and conventional varieties are typically combined in the grain handling system for more efficient use of crops from multiple sources.<sup>4</sup> Thus, foreign regulations on biotech could affect all U.S. exports of these commodities as well as food products containing or derived from biotech crops. Specifically, regulations limiting or banning the importation of foods containing biotech products present serious challenges to U.S. exporters of corn and soy products, according to Department of State and USDA officials.

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<sup>2</sup>In May 2002, GAO reported on biotechnology experts' views on the adequacy of tests used to evaluate potential health risks associated with genetically modified foods. Experts we contacted agreed that the regimen of tests used is adequate in assessing the safety of such foods. See U.S. General Accounting Office, *Genetically Modified Foods: Experts View Regimen of Safety Tests as Adequate but FDA's Evaluation Process Could Be Enhanced*, GAO-02-566 (Washington, D.C.: May 23, 2002).

<sup>3</sup>According to USDA officials, more than 17 countries currently produce biotech agricultural commodities. According to a USAID official, an estimated 20 percent of the Brazilian soy crop and 20 percent of South Africa's yellow maize are bioengineered.

<sup>4</sup>Once a product of modern agricultural biotechnology is determined to be as safe as its conventional counterpart, it is allowed to circulate freely in the U.S. market.

Several international organizations are involved in developing guidance on biotech food and its regulation. The Codex Alimentarius Commission (Codex)—a joint FAO/WHO body responsible for an international food code—has been developing principles for the human health risk analysis of biotech foods. These principles are based on a premarket assessment, performed on a case-by-case basis, that evaluates both direct effects (from the inserted gene) and unintended effects that may arise from inserting the new gene. The principles are in the final stage of an eight-step international agreement process. Draft language under consideration includes an option for mandatory labeling based on the method of production, even if there is no detectable presence of DNA or protein in the end product resulting from genetic modification. The United States and several other countries have opposed mandatory processed-based labeling for foods, which may contain the products of agricultural biotechnology. They favor mandatory labeling only with regards to allergic reactions, changes in nutritional content, and changes in handling requirements. Codex has been deadlocked on the labeling issue for several years.

The Cartagena Protocol on Biosafety, an international environmental treaty, regulates transboundary movements of LMOs. Biotech foods are within the scope of the protocol only if they contain LMOs. The protocol requires exporters to get consent from importing countries before the first shipment of LMOs intended for release into the environment. This requirement does not apply to LMOs intended for direct use as food, feed, or for processing.<sup>5</sup> The protocol will enter into force 90 days after the 50<sup>th</sup> country has ratified it, which may be in late 2003, according to a USAID official. The United States is not a signatory to the agreement. However, according to U.S. officials, as a practical matter U.S. exporters will need to observe and comply with local regulations implementing the protocol.

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## U.S. Versus EU Approval Process

The United States and the European Union (EU) have very different regulatory frameworks for approving new agricultural biotech products.

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<sup>5</sup>For these products, the protocol establishes procedures for countries to exchange information. According to the protocol, the initial documentation should clearly identify that the shipment “may contain” LMOs that are not intended for intentional introduction into the environment and contain a point of contact for further information. Subsequent information that will be placed on an international data base should contain information such as the characteristics of LMOs; any national laws, regulation, or guidelines on LMOs; and other related information.

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The United States generally applies existing food safety and environmental protection laws and regulations<sup>6</sup> to biotech products and approves them based on their characteristics rather than on whether they are derived from biotechnology. To evaluate new products, U.S. regulators require sufficient evidence to determine their safety or risk. Under this approach, the United States has approved most new biotech varieties.

The EU follows the “precautionary principle,” under which the EU maintains that approval of new biotechnology products should not proceed if there is “insufficient, inconclusive, or uncertain” scientific data regarding potential risks. The EU has not approved any new biotech foods for marketing since 1998.<sup>7</sup> This stance has affected the viability of biotech trade in other parts of the world. For example, given the importance of the EU market, U.S. soybean producers have been reluctant to introduce new biotech varieties not approved for marketing in the EU. Similarly, maize growers in Argentina, who export to the EU, are deferring planting a biotech variety known as “Round-up Ready” corn because the EU has not approved it. They are only planting biotech varieties approved by the EU.

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## Biotech Issues in Zimbabwe

According to U.S. officials, Zimbabwe raised concerns about the potential adverse environmental and commercial/trade impacts of unmilled biotech products as early as the summer of 2001, a year before the U.N.’s southern Africa appeal. It did not want planting of whole kernel biotech seeds or feeding of livestock on biotech products. In December 2001, the United States offered to provide 14,300 MT of maize to Zimbabwe, but the government refused, since it could not be certified as GMO-free. In January 2002, the United States agreed to provide 8,500 MT of fortified corn meal to Zimbabwe as an initial contribution to a WFP program launched in November 2001. Since this was a milled product that did not contain any living GMOs, the government accepted it.

In May 2002, the United States offered an additional shipment of 10,000 MT of whole kernel maize for the WFP program. The government again said it would only accept contributions that included assurances that the food

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<sup>6</sup>The U.S. system involves coordination among USDA, the Environmental Protection Agency, and the Food and Drug Administration.

<sup>7</sup>According to a U.S. official, the EU has had a moratorium on new approvals, which goes a step beyond merely applying precaution to each regulatory decision.

was not derived from GMOs. As a result, the maize was reallocated to Zambia, Malawi, and Mozambique.

Near the end of July 2002, Zimbabwe proposed to accept a U.S. offer of 17,500 MT of maize that might contain biotech commodity. However, the maize would be temporarily stored in silos to be milled and subsequently distributed. In the meantime, the government would use its own maize for distribution, which would be packed into USAID food bags and distributed. This proposal became known as “the swap.” Near the end of August, the United States approved the swap arrangement. However, on September 1, the Agriculture Minister of Zimbabwe was quoted as emphatically rejecting biotech food assistance.<sup>8</sup> Four days later, though, the President approved accepting biotech maize, subject to special shipping, milling, and distribution requirements.<sup>9</sup>

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## Biotech Issues in Zambia

In February and March 2002, WFP and U.S. officials notified Zambia that U.S. donations to that country would likely include maize containing biotech varieties. In June 2002, Zambia’s Vice President said the country would gladly accept the U.S. maize Zimbabwe refused. However, during June and July a public debate on biotech food began and appeared to be backed strongly by the opposition political party. In August, a 6-hour town meeting on the issue was held, and on August 16, the government decided to suspend all biotech imports and distributions.

After this announcement, the USAID Administrator invited seven Zambian scientists to visit the United States on a fact-finding mission regarding the biotech issue. The scientists came to the United States in September and subsequently visited South Africa and several European countries as well. Their report concluded that:

- distributing biotech maize carries a high risk of eroding local maize varieties;

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<sup>8</sup>The swap never took place because the Zimbabwe government did not fulfill its part of the agreement, according to USAID officials.

<sup>9</sup>According to U.S. officials, as of late February 2003, WFP had milled more than 41,000 MT of U.S. maize in Zimbabwe and some U.S. maize destined for Zimbabwe in South Africa. WFP was expecting that all U.S. corn stored in the region would be milled and transported to end sites by the end of March or early April.

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- the safety aspects of biotech foods are not conclusive;<sup>10</sup> and
  - there is a potential risk of biotech maize, if planted, affecting the export of baby corn and honey in particular and organic foods in general to the EU.

They recommended that the government continue its policy of not accepting biotech foods. On October 29, the Zambian government agreed.

Seven experts in the field of modern agricultural biotechnology reviewed the Zambian scientists' report for us. With regard to human health and safety issues, two experts found the report to be fair, accurate, and fact-based; two experts disagreed with this assessment; and three did not respond. Concerning environmental issues, three experts said the report was fair, accurate, and fact-based; two experts disagreed; one expert was not certain; and one did not respond. The experts generally agreed that cross-pollination, or gene flow, would occur between biotech and conventional maize plants, but disagreed about whether this warrants a ban on biotech maize. Four experts suggested that milling of biotech maize was a viable option for maintaining safety while simultaneously feeding the hungry; the other three did not comment on this issue. Overall, the experts supported the need for Zambia and other southern African countries to be able to assess GMOs in their environments.

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## U.S. Views and Approach

During June 2002, the United States planned how it would respond to the biotech issue. It recognized that (1) Zimbabwe's rejection of whole kernel maize was a problem that had to be addressed, (2) other affected countries' positions on the import and transport of biotech food needed to be determined, and (3) it was important to provide information about biotech food. By early July, the United States was planning to use private and, if necessary, public diplomacy to get the affected countries to accept the biotech food aid. It would work with and through SADC and its members to remove barriers to biotech food aid and would support WFP in asking for humanitarian exceptions to current and proposed biotech regulations. When feasible, the United States would attempt to provide alternative food aid to countries that had bans on agricultural biotechnology in place. However, if recipient countries placed special regulations on biotech

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<sup>10</sup>Issues include concerns related to toxicity, allergenicity, and antibiotic resistance.

products—for example, milling or labeling requirements—they themselves would have to pay to implement these requirements. The U.S. government opposed agreeing to provide only milled biotech food aid because the process added costs and delayed shipments.

On July 25, 2002, the State Department directed its embassies in the six affected states and Botswana to stress to host governments the importance of addressing the region's immediate needs rather than engaging in protracted debate on the merits or supposed dangers of biotech food. State warned that recent decisions by some recipient and transit countries not to accept whole kernel biotech maize risked endangering the lives of millions of people. State advised U.S. missions to urge SADC member states to immediately adopt an agreement allowing unrestricted import and distribution of food aid, including biotech produce, on an emergency basis for the duration of the crisis. State's background and guidance to its overseas posts on biotech food aid included the following:

- Food that is exported from the United States, whether commercially or through food aid, is the same food eaten by Americans in terms of its GMO content.
- To date, there is no scientific evidence to suggest that commercially available biotech commodities and processed foods are any less safe than their conventional counterparts.
- Commercially produced bioengineered plant varieties in the United States have been reviewed under the U.S. regulatory process, which sets rigorous standards for human, animal, and plant health and for environmental safety. These varieties have received safety approval in a number of countries.
- Developing countries are concerned that genetically engineered genes may contaminate other farmers' fields or wild plants in the centers of origin, but this occurrence would not necessarily be negative or damaging. Genes naturally flow (through cross-pollination) between traditionally developed varieties and modern hybrids.
- Some African countries are concerned that if farmers plant whole grain U.S. food aid, their trade with the EU may be affected. At this point in time, the only whole grain in food aid that might contain biotech varieties is maize. If whole maize is planted, it is possible biotech varieties co-mingled in food aid could cross-pollinate with local

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varieties. However, it is unlikely that the biotech grain will grow well as it is made from hybrid seed and not well-adapted to conditions in southern Africa.

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## U.N. Response

In May 2002, WFP's Executive Director raised the issue of biotech food aid with the U.N. Secretary General and in June briefed him on why biotech food aid was an impediment for operations in southern Africa. By early July 2002, the U.N. Under Secretary-General for Humanitarian Affairs had sought guidance from FAO, WHO, and WFP regarding food aid with biotech components. The FAO Director-General responded with a letter incorrectly citing the Cartagena Protocol as recommending that all food aid that might contain biotech products be subject to an "advanced informed agreement" and be milled before distribution to avoid the possibility of germination. However, the Cartagena Protocol expressly states that advanced informed agreement does not apply when the shipment is for direct use as food or feed, or for processing, nor does it suggest that grain shipments containing living biotech components be milled. After the United States raised concerns about this misinformation, the Director-General issued a correction letter.<sup>11</sup> Nonetheless, the FAO representative in Malawi repeated the same erroneous recommendations to Malawi's Ministry of Agriculture. The United States again cited the error, but in August, the FAO representative in Zimbabwe gave similar inaccurate advice. This time, when the United States alerted FAO, the problem was quickly corrected, according to FAO.

On August 23, 2002, FAO, WHO, and WFP issued a joint U.N. statement on the use of biotech foods as food aid in southern Africa.<sup>12</sup> Its key points included the following:

- Although there are no existing international agreements in force regarding trade in biotech food or food aid, WFP policy is that all donated food must meet the safety standards of both the donor and

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<sup>11</sup>The Director-General advised U.S. officials that it was still possible that material imported for food, feed, or processing purposes could be used as seed or that spillage could occur, which might lead to propagation of the GMO in the country of import or transit. Processes such as milling, he noted, make germination impossible.

<sup>12</sup>According to WFP officials, WFP's Executive Director was tasked to negotiate drafting of the statement.

recipient countries and all applicable international standards, guidelines, and recommendations.

- FAO and WHO are confident that the principal country of origin (i.e., the United States) has applied its national food safety risk assessment procedures to its food aid and has fully certified that these foods are safe for human consumption. Based on national information from a variety of sources and current scientific knowledge, FAO, WHO, and WFP believe the consumption of biotech food now being provided as food aid in southern Africa is unlikely to present human health risk.
- Any potential risks to biological diversity and sustainable agriculture from inadvertent introduction of GMOs have to be judged and managed by countries on a case-by-case basis. In the case of maize, processing techniques such as milling or heat treatment may be considered to avoid inadvertent introduction of biotech seed. However, U.N. policy does not require that biotech grain used for food, feed, or processing be treated this way.
- Governments must carefully consider the severe and immediate consequences of limiting the food aid available for millions so desperately in need.

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## European Union Statement

Several of the southern African countries were concerned that if whole kernel biotech maize were planted and used as feed for their cattle, their ability to export grain and cattle to the EU would be hampered. On August 28, 8 days after Zambia announced it would not accept biotech foods, the delegation of the European Commission in Zambia issued a press release to clarify its position, which stated the following:

- The United States, the EU, and others have evaluated several biotech maize varieties, and some have been authorized for use, including planting. Given the serious food shortages in the region, governments may want to use these evaluations rather than wait for them to be repeated locally.
- The fact that a country grows biotech maize has no impact on its ability to export other agricultural products to the EU.

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**Appendix VII**  
**Biotech Food and the Southern Africa Food**  
**Crisis**

- 
- The importation and use of biotech maize in a form other than grain should eliminate concerns about negative biodiversity effects and trade consequences.<sup>13</sup>
  - EU scientists have found no evidence that the biotech maize varieties they have assessed are harmful to human health.

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<sup>13</sup>Although the EU statement indicated Zambia's acceptance of biotech maize would not legally undermine its ability to export biotech maize to the EU, private entities could add restrictions that might affect such exports..

# Comments from the Department of State

Note: GAO comments supplementing those in the report text appear at the end of this appendix.



United States Department of State

Washington, D.C. 20520

JUN 3 2003

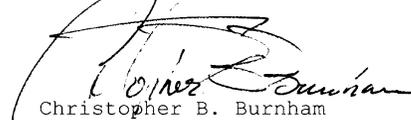
Dear Ms. Westin:

We appreciate the opportunity to review your draft report, "FOREIGN ASSISTANCE: Sustained Efforts Needed to Help Southern Africa Recover from Food Crisis," GAO-03-644, GAO Job Code 320145.

The enclosed Department of State comments are provided for incorporation with this letter as an appendix to the final report.

If you have any questions concerning this response, please contact Lois Aroian, Bureau of African Affairs, at (202) 647-9849.

Sincerely,

  
Christopher B. Burnham  
Assistant Secretary and  
Chief Financial Officer

Enclosure:

As stated.

cc: GAO/IAT - Wayne Ferris  
State/OIG - Luther Atkins  
State/AF - Walter Kansteiner

Ms. Susan S. Westin,  
Managing Director,  
International Affairs and Trade,  
U.S. General Accounting Office.

Department of State Comments on GAO Draft Report

**FOREIGN ASSISTANCE: Sustained Efforts Needed to Help  
Southern Africa Recover from Food Crisis**  
(GAO-03-644, GAO Code 320145)

The Department of State welcomes the opportunity to comment on the GAO's draft report on Foreign Assistance: Sustained Efforts Needed to Help Southern Africa Recover from the Food Crisis. The Department concurs with the report's general thrust, conclusions, and recommendations. In particular, the report showed that the food crisis was actually a complex humanitarian emergency of which food was just one element.

See comment 1.

On the recommendations, the U.S. is taking steps to improve long-term food security throughout the world, not just in southern Africa. Our Missions overseas, through cooperative efforts between State and USAID and guided by their Washington agencies, already integrate agricultural development, HIV-AIDS awareness and action, and disaster management. Some of our Missions include an HIV-AIDS education component in each and every aid assistance program.

We have also been working with our partners in the G8 to create a new multilateral framework for preventing and mitigating the effects of famines so that communities will not have to sell all they have in a desperate -- and too often unsuccessful -- attempt to save their children's lives. We would like our G8 partners to commit to 1) increased food assistance to meet current emergency needs, 2) agreement to use more flexible approaches to addressing food crises (such as cash-for-work programs) and 3) long-term efforts to increase agricultural productivity. These efforts are critical because a global scourge needs a united global response.

See comment 2.

The Department suggests that the report note at the outset that the U.S. anticipated the crisis, prepositioned food in the most vulnerable countries in order to meet it, and placed food in the pipeline so that it would arrive in a timely way (p. 4). The report should explain that the C-SAFE program resulted from a longer-term strategy that targeted the most vulnerable populations that the WFP program might miss (p. 14).

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**Appendix VIII**  
**Comments from the Department of State**

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See comment 3.

In 2000, the Government of Zimbabwe initiated a chaotic and often violent land reform campaign (pp. 6, 8). This campaign was characterized by mob occupation of commercial farms and the forced expulsion of landowners and farm laborers. In many instances, landowners and farm laborers were deprived of all their personal possessions. The Government of Zimbabwe has actively blocked efforts by landowners to seek legal protection of their property and redress for their loss. At the same time, many commercial farms were taken over by senior Government of Zimbabwe officials and supporters. To date, no landowner has been compensated for seized land, and more than a million internally displaced farm laborers remain displaced. The result in 2002-3 was that, once expelled from their lands, farm workers were left with no way to support or feed themselves, regardless of crop failure.

See comment 4.

On the issue of food aid, containing bioengineered food, the Department works in conjunction with USDA, USAID and other agencies to coordinate outreach and capacity-building efforts to increase understanding of agricultural biotechnology and its related regulatory and policy issues. In this specific instance, the interagency working group on the southern Africa famine did develop alternative means to address the crisis once it became apparent that some countries might reject the food aid. When Zambia opted to reject the biotech corn, for example, the U.S. sent sorghum and bulgur. Such substitutions are often possible but are dependent on availability, and substitutes are often more expensive. Additionally, the U.S. tries to provide the staples usually consumed in the affected area, to the extent possible. An interagency review on how to manage the presence of bioengineered foods in food aid may be useful for developing a strategy; however, such a review should be narrowly focused to ensure better coordination between food aid, development, trade policy and regulatory agencies. Language to reflect this need would be more appropriate.

See comment 5.

There are a number of inaccuracies in the report regarding biotech food.

See comment 6.

The report characterized Malawi as a country that rejected biotech food (p. 22). In fact, Malawi readily accepted whole-grain biotech maize, asking only that the corn distributed during the planting season, a relatively

**Appendix VIII**  
**Comments from the Department of State**

short period, be milled. Much of the food aid that others did not accept ended up in Malawi.

The report referred to food being delayed in the ports because of the biotech impasse (p. 24), but actual port clogging was also a problem. Detailing of a port captain to address this problem helped clear the food aid through the ports.

See comment 7.

The report mentioned the public debate and town meeting in Zambia that addressed the biotech food aid issue. As the report notes, this issue became politicized. Proponents of accepting biotech food, scientists who sought to speak on the issue, were shouted down at the town meeting. The report contains no information about the active campaign of NGOs in Zambia and elsewhere to spread misinformation about biotechnology. Moreover, the U.S. provided extensive materials about agricultural biotechnology and the safety of biotech food aid to Zambia and the other countries affected by the food crisis. There is very little mention in the report of these numerous efforts.

See comment 8.

We would urge a review of Appendix VII, "Biotech Foods" because it provides some inaccurate and incomplete information on bioengineered foods. The definition of genetically modified organisms (p. 49) is incorrect and should be re-defined as "organisms in which the genetic material (DNA) has been altered via introduction of foreign DNA using in vitro techniques." On the same page, the discussion of safety issues associated with biotech foods does not make clear that these are the types of potential issues that regulators and scientists consider before approving a product for commercial use.

See comment 9.

The discussion of international organizations involved in work on biotechnology issues (pg. 50) confuses work ongoing in various Codex Alimentarius committees and incorrectly links work on risk assessment guidelines in the final stage of approval with the issue of labeling information, whether mandatory or voluntary. The paragraph on the Cartagena Protocol on Biosafety (p. 50) states that the Protocol will enter into force in 2004. Forty-eight countries have ratified the Protocol, leaving only two more for entry-into-force. It is expected that the final ratifications will be forthcoming by mid-2003, with the Protocol entering into force no later than December 2003.

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**Appendix VIII**  
**Comments from the Department of State**

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See comment 10.

As for U.S. compliance with the Protocol, we cannot be a signatory, so we have no rights or obligations under the Protocol; however, our exporters will most likely need to observe the requirements. Thus, we suggest that the report state that "as a practical matter the United States will need to act in a manner consistent with many of the treaty requirements.... Footnote number 40 (p.50) inaccurately summarizes and paraphrases the requirements of the Protocol pertaining to shipments of LMO's intended for direct use as food, feed, or for processing.

See comment 11.

Finally, on page 51, the statement of Europe's use of the "precautionary principle" is not fully accurate. The definition of the principle in the report is only one manifestation of the use of this principle.

Please do contact us if you need further assistance.

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The following are GAO's comments on the State Department's letter dated June 3, 2003.

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## GAO Comments

1. We recognize that the United States is taking steps to help improve long-term food security in the region that include, among others, the Agricultural Initiative to Cut Hunger in Africa, which was introduced early last year. However, as noted in figure 11, overall assistance to the region's agricultural sector has declined between 1998 and 2003; and as of April 2003, only one out of the six countries (Mozambique) was proposed to receive funding under the new initiative. We also recognize that U.S. bilateral assistance in several of the affected countries has funded a number of programs related to food security over the years, including ongoing programs on agricultural development, HIV/AIDS, and disaster management. While all these programs do help to promote food security, U.N. and U.S. officials told us that to have broad impact, these programs need to be implemented on a much larger scale. Our recommendation that U.S. agencies work with international organizations, donors, and national governments to develop a comprehensive, targeted strategy for sustained recovery would, if implemented, help coordinate efforts, integrate approaches, and leverage limited resources as necessary to achieve greater effectiveness.
2. We modified the text on pages 3 and 23 to note that the United States anticipated the crisis at the outset. Although the United States acted early so that food would arrive in a timely way, USAID officials advised us that no food was prepositioned in any of the countries. We modified the text on page 18 to reflect the point on the C-SAFE program.
3. We modified the text on pages 10-11 to reflect this information.
4. According to USAID officials, available quantities of sorghum and bulgur were limited.
5. We noted this view on page 46.
6. We modified our discussion of Malawi's policy on page 31.
7. We modified the text on pages 31 to reflect this point.

8. We replaced the definition, cited from a World Health Organization publication, with an alternative. See pages 3 and 65. We modified the discussion of safety issues on pages 64-65.
9. We modified the text on these several issues on page 67.
10. We clarified this footnote, on page 67, to indicate what information would be required in the initial documentation and what information would be required in subsequent exchanges of information.
11. On page 68, we changed our reference to the precautionary principle to clarify that the statements represent the EU's arguments under the principle.

# Comments from Department of Agriculture

Note: GAO comments supplementing those in the report text appear at the end of this appendix.



United States  
Department of  
Agriculture

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Agricultural  
Services

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Agricultural  
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Washington, DC  
20250-1001

Mr. David B. Gootnick  
Director, International Affairs and Trade  
U.S. General Accounting Office  
441 G Street, N.W.  
Washington, D.C. 20548

JUN 3 2003

Dear Mr. Gootnick:

The U.S. Department of Agriculture (USDA) would like to thank the General Accounting Office for the opportunity to comment on draft report #GAO-03-644 entitled "FOREIGN ASSISTANCE: Sustained Efforts Needed to Help Southern Africa Recover from Food Crisis." USDA is pleased to provide the following three types of comments: (1) a response to the recommendations; (2) thematic comments regarding the draft report; and (3) specific comments on the draft report.

Response to Recommendations for Executive Action

The draft report recommends "the Secretaries of State and Agriculture and the Administrator of USAID initiate a comprehensive review of the issues pertaining to biotech foods in emergency food aid." USDA agrees that all relevant parts of the U.S. Government must continue to review and engage other countries regarding their biotech policies, including those related to food aid.

Biotechnology and its acceptance are not new issues. In fact, the issues discussed in the report are identical to those issues faced by commercial exports of the same products in many of the same countries. USDA will continue to work closely with other U.S. Government agencies to ensure that efforts to address concerns are consistent with overall U.S. biotech policies. Specifically, USDA will continue to support developing countries' efforts to enhance their capacity for making science-based and transparent decisions regarding products of modern agricultural biotechnology. U.S. Government-wide efforts are substantial in providing technical assistance to developing countries that either have or might in the future face food aid needs. These range from long-term capacity building efforts associated with the U.S. Agency for International Development (USAID) programs to shorter-term projects such as USDA's Cochran Fellowship Program. These efforts remain a priority for providing a better global understanding of the regulatory issues associated with biotechnology and its acceptance since it is impossible to predict where the next food security crisis will develop. The challenge that must be addressed is building confidence in the existing safety evaluation systems for products of modern biotechnology, both in the U.S. and in other countries.

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-2-

It is difficult to accurately identify countries that might accept or reject products of modern agricultural biotechnology. Given the rapidly advancing nature of the topic, many developing countries' policies depend upon the specific political, economic and social circumstances that might exist at the time. As the draft report accurately indicates, the policies and their implementation and application evolved over the course of the food aid crisis in southern Africa in 2002. However, the U.S. Government is committed to providing food under aid programs that always meets the health and safety requirements in the U.S. and the importing country.

USDA has always provided food aid recipients with a wide variety of products that are available to meet emergency needs. In addition, other factors are considered, including normal dietary patterns, availability and costs. All of the products that are provided under these programs meet all the health and safety requirements necessary for the products to be consumed in the U.S. There is no difference between those products provided under food aid programs and the safe and nutritious food consumed by millions of Americans every day.

Thematic Comments on the Draft Report

See comment 1.

The draft report, as written, attributes the problems that occurred in providing food aid to southern Africa directly to the food aid itself. However a more accurate representation would be that the countries in need of the food aid had non-transparent, non-science based or shifting regulatory regimes regarding biotechnology. U.S. policy regarding which commodities to provide as food aid and how to respond to food aid crises did not change. However, the policies of food aid recipient countries and their application did change, as is reflected in the report.

See comment 2.

In the U.S., once a product of modern agricultural biotechnology is determined to be as safe as its conventional counterpart, it is allowed to circulate freely in the U.S. market. The U.S. Government does not make or require any distinction between "biotech" or "non-biotech" food for sale commercially or distribution through food aid channels. Therefore, the use of these terms in the draft report makes a distinction that does not exist under U.S. law or policy and is misleading. All food that is available under U.S. food aid programs, whether it includes biotech components or not, meets the same high safety threshold applicable to food available in the U.S. These decisions are scientifically based and transparent.

In responding to food security needs, the first and highest priority of the U.S. is to ship enough safe and nutritious food to feed hungry people. Providing alternatives to our current food aid programs to address non-science based requirements regarding biotechnology increases costs and the time required to deliver critical food needs. As a

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**Appendix IX**  
**Comments from Department of Agriculture**

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-3-

result, the amount of food that the U.S. can provide and the number of people we can help declines.

In addition, specific technical comments on the draft report are contained in Attachment A for your review and consideration.

In closing, I again want to thank you for allowing us to comment on this draft report. Please let us know if you would like to discuss our comments further.

Sincerely,

*W. Karl Miller*

*for* A. Ellen Terpstra  
Administrator

---

The following are GAO's comments on USDA's letter dated June 3, 2003.

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**GAO Comments**

1. We modified the text on page 30 to reflect this point.
2. We modified the text on page 66 to reflect the first point. Our draft report noted that the biotech and conventional varieties are typically combined in the U.S. grain handling system. Regarding the use of the term biotech, see pages 45-46.

# Comments from the U. S. Agency for International Development

Note: GAO comments supplementing those in the report text appear at the end of this appendix.



U.S. AGENCY FOR  
INTERNATIONAL  
DEVELOPMENT

JUN 9 2003

Mr. David B. Gootnick  
Director, International Affairs and Trade  
U.S. General Accounting Office  
441 G Street, N.W.  
Washington, DC 20548

Dear Mr. Gootnick:

I am pleased to provide the U.S. Agency for International Development's (USAID's) formal response to the draft GAO report entitled "Foreign Assistance: Sustained Efforts Needed to Help Southern Africa Recover from Food Crisis" (June 2003). It was reviewed by USAID's Office of Food for Peace (FFP), the Bureau for Economic Growth, Agriculture and Trade, the Bureau for Africa, and USAID Missions in southern Africa.

We appreciate your pointing out that the US food aid response in the early stages of the crisis was both substantial and timely. The United States Government (USG) recognized early in 2002 that the situation in southern Africa would require a very large food aid response, and immediately sought ways to ensure that initial shipments would arrive in southern Africa early in the crisis. As a result, the first shipment of food aid from the United States arrived in Durban, South Africa in May 2002. By December 2002, the United States had delivered over 400,000 metric tons of food aid to the region, representing over 57% of the total food aid pledges through that period.

We agree with the observation stated in the report that most other donors were slow to pledge and then slow to deliver on their pledges. The USG continues to use various international and in-country fora to urge other donors to respond in a more timely and robust fashion to food security crises.

USAID agrees with the GAO recommendation to develop a comprehensive, targeted strategy to ensure sustained recovery

1300 PENNSYLVANIA AVENUE, N.W.  
WASHINGTON, D.C. 20523

See comment 1.

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**Appendix X**  
**Comments from the U. S. Agency for**  
**International Development**

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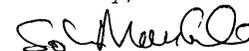
from the southern Africa food crisis. The need for such a recovery strategy was identified early in the crisis in mid-2002. A Recovery Strategy/Action Plan that conforms to the GAO recommendation has already been drafted and is in the process of being reviewed by other USAID offices, other USG agencies, donors and non-government development partners. The draft strategy is already serving as a guide to the development and review of new USAID country strategies in southern Africa.

USAID supports the recommendation for further interagency discussion and coordination on the dimensions of biotechnology in food aid. Among the specific recommendations, USAID is actively engaged in supporting the development of capacity in a number of food aid recipient countries to make informed decisions about biotechnology. In practical terms, however, building such capacity is a long-term strategy and is unlikely to assist in emergency situations such as we saw in southern Africa. In almost all instances to date, developing countries have taken a year or more to conduct biotechnology regulatory reviews before issuing a decision. Thus, such reviews disrupt emergency food aid responses.

We believe the most practical solutions will be to work with recipient governments and partners involved in the delivery of food aid to build confidence in the existing safety evaluations of these products. This will include evaluations done in the U.S. by other countries, scientists, and international organizations such as WHO and FAO. Additionally, we note that in this instance, the impact on food aid delivery was not catastrophic because the impasse only occurred in one country. This allowed the United States and the WFP to re-route food and find complimentary donor support with relative success. If concerns with biotechnology occur on a larger scale, we will need to look at our food aid delivery options and not just consider biotechnology.

Thank you for the opportunity to respond to the GAO draft Report and for the courtesies extended by your staff in the conduct of this review.

Sincerely,



John Marshall  
Assistant Administrator  
Bureau for Management

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The following are GAO's comments on USAID's letter dated June 9, 2003.

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## GAO Comments

1. Currently in draft form, the recovery strategy/action plan USAID outlines in its comments represents a beginning. USAID notes that its draft strategy has already been useful as a planning tool in developing USAID's country strategies for the region. As such, the recovery strategy/action plan will help target U.S. efforts. However, our recommendation goes beyond U.S. efforts. To ensure sustained recovery in an environment of constrained resources, we believe there is a need for a comprehensive strategy that pulls together the efforts of international organizations, donors, and national governments; integrates approaches; and leverages limited resources.

# Comment from the World Food Program

Note: GAO comments supplementing those in the report text appear at the end of this appendix.



World Food Programme

Programa Mundial de Alimentos

Programme Alimentaire Mondial

برنامج الأغذية العالمي



The Executive Director

2 June 2003

Mr. David B. Gootnick  
Director  
International Affairs and Trade Attachment  
U.S. General Accounting Office  
441 G. Street  
N.W. Washington D.C. 20548  
U.S.A.

Dear Mr. Gootnick:

I would like to begin by expressing my appreciation to the GAO for the opportunity to review and provide comments on its very important study, Sustained Efforts Needed to Help Southern Africa Recover from Food Crisis.

I was pleased to note that the GAO report reinforces many of the conclusions of the two interagency missions that I led to the region as the United Nations Secretary-General's Special Envoy for Humanitarian Needs in Southern Africa. Most notably:

- The importance of understanding the linkages among food security, HIV/AIDS and nutrition. Although this is an area where there has already been a considerable amount of research and advocacy, the southern African crisis is the first large-scale emergency where the need to look at the interface among these issues has been so compelling;
- The need for the international community to urgently and radically alter the way it operates in southern Africa in the short and medium term. All agencies should review the appropriateness of their development and emergency operations in southern Africa because addressing the profound problems of the region will require a broad effort involving all key actors, including the United Nations, intergovernmental regional bodies, governments, International Financial Institutions, donors, large and small civil society organizations, activists and the private sector.

The report correctly notes that there was a wide range of factors that contributed to the 2002/2003-food crisis. While the report has captured most of the main ones, I would like to further highlight a few issues, which might provide an even more comprehensive understanding to readers.

1) There are two crucial factors that I would recommend be further highlighted - extreme poverty and regional economic decline. The report does touch briefly on

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See comment 1.

See comment 2.

Appendix XI  
Comment from the World Food Program

WFP

2

Southern Africa's deep, structural poverty but stresses neither the role it played in exacerbating the food crisis in 2002-03 nor its contribution to ongoing food insecurity. The percentage of people living below the poverty line in all six countries is staggering (from 42% and rising in Zimbabwe to over 60% in the other five affected countries). Faced by severe food shortages and rapidly escalating prices, most of the poorest families could not afford to buy what little food was available at local markets, especially as they had few – if any – household assets to sell. One of the reasons why the number of people in need rose during the 2002-03 crisis from an initial estimate of 12.8 million vulnerable people to 15.3 million was that rising prices left more and more households in need of food assistance because they lacked the financial means to purchase maize at market prices.

The region is battling with a host of serious economic problems, such as rising unemployment, which have increased people's vulnerability. Many of the countries have been severely affected by retrenchments in the South African mining industry, while the region as a whole has suffered from the dramatic economic collapse in Zimbabwe.

2) In the specific case of Zimbabwe, the report makes several references to land reform and the impact that it has had on agricultural production. However, the report could do more to mention Zimbabwe's economic woes, which have seen the country's Gross Domestic Product fall by more than 20 percent between 1998 and 2002 and unemployment rise by more than 25 percent over the same period. In 2003, the economy is projected to decline by a further 14-16 percent. Meanwhile, inflation has now soared to over 269 percent. All of this has had a devastating impact on the country's population – both in rural and urban areas. Furthermore, the Government's lack of foreign exchange and price controls on basic commodities have caused shortages of everything from bread, milk, sugar and wheat flour to fuel and electricity.

On another issue, the GAO report is correct that there is a lag time between pledges and the arrival of commodities in country. The early months of EMOP 10200 would indeed have benefited from more rapid mobilization of resources. However, an important consideration in this regard is the nature of donor funding. Cash resources are much more quickly mobilized than in-kind contributions. I would urge that it be reflected in the report that WFP has purchased nearly 400,000 MTs of commodities regionally for this EMOP in the period through the end of April 2003.

We certainly would not wish the report to send out a message that, in the aggregate, donor response to this operation has been lacking. As of mid-May, the regional operation is 93 percent resourced and we have had an extraordinary range of donors in the crisis response. It is important to note that 41 different institutional donors contributed to EMOP 10200, including such notable non-traditional donors as South Africa, Algeria, Cameroon, Andorra, Oman, Malaysia, San Marino, Thailand, Singapore, the Nelson Mandela Foundation and the Latter Day Saints. Rather than reflecting poorly on the donor community, I would suggest that donors have been unusually supportive of EMOP 10200.

See comment 3.

See comment 4.

See comment 4.

WFP

3

Hunger and chronic malnutrition cannot be resolved through periodic emergency appeals during those periods when food insecurity is most acute. WFP fully supports the conclusion of the GAO that this will require a sustained effort. Although it is perhaps stating the obvious, formulating a comprehensive strategy will not make a difference in the lives of those in southern Africa unless resources are made available to implement it. We have seen too often, in too many emergencies, that while there can be an extremely generous outpouring of external assistance to tackle the immediate manifestations of a crisis, it is much more difficult to maintain a similar level of engagement to address the longer-term structural and chronic factors, which contribute to such high levels of vulnerability.

In all that we do, our actions must concentrate on the needs of women and children as they are bearing the brunt of this crisis. As noted in the report of the second Special Envoy mission to the region. "The untenable burdens of domestic and informal-sector labour on African women and girls, coupled with their socially constructed vulnerability, low social and economic status and severely limited autonomy, must be addressed with full-scale and immediate interventions. The current willingness to assign additional responsibilities brought on by HIV/AIDS to already overburdened women and girls threatens to undo the limited progress made to date towards gender equality. Necessary interventions range from legislation to uphold women's human rights, technological advances to reduce the physical and social toll of their labour, and financial or social compensation for labour assumed in the absence of social systems to deal with HIV/AIDS – related sickness, death, hunger and dependency".

In closing, I would like to again express our appreciation to the GAO for their efforts over the past eight months to better understand not only the factors contributing to this crisis and how together we have responded, but also helping to underscore the importance of continuing collaboration in tackling the longer term issues.

The World Food Programme looks forward to working together with the United States Government and all of our other partners in defining and implementing a sustainable recovery strategy.

Sincerely,



James F. Morris

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The following are GAO's comments on the WFP's letter dated June 2, 2003.

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## GAO Comments

1. We agree with WFP's support for further collaboration with the U.S. government and other partners in defining and implementing a sustainable recovery strategy.
2. We further highlighted the problems of extreme poverty and regional economic decline on page 11.
3. We further highlighted Zimbabwe's economic problems on page 11.
4. We reflected these points on page 25.

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# GAO Contacts and Staff Acknowledgments

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## GAO Contacts

Phillip J. Thomas (202) 512-9892  
Wayne Ferris (202) 512-5169

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## Acknowledgments

In addition to the persons named above, Joy Labez, Miriam Carroll, Kendall Schaefer, and Janey Cohen made key contributions to this report. Nathan Anderson, Nima Edwards, Etana Finkler, Chase Huntley, Bruce Kutnick, Jeremy Latimer, Barbara Shields, and Eve Weisberg provided technical support.

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Washington, D.C. 20548

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**United States  
General Accounting Office  
Washington, D.C. 20548-0001**

**Official Business  
Penalty for Private Use \$300**

**Address Service Requested**

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**Presorted Standard  
Postage & Fees Paid  
GAO  
Permit No. GI00**

